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Journal of Economic, Administrative and Political Studies is a double-blind peer-reviewed journal which provides a platform for publication of original scientific research and applied practice studies. Positioned as a vehicle for academics and practitioners to share field research, the journal aims to appeal to both researchers and academicians.

ABOUT THE JOURNAL

The Florya Chronicles Journal is the scholarly publication of the İstanbul Aydın University, Faculty of Economics and Administrative Sciences. The Journal is distributed on a twice a year basis. The Florya Chronicles Journal is a peer-reviewed in the area of economics, international relations, management and political studies and is published in both Turkish and English languages. Language support for Turkish translation is given to those manuscripts received in English and accepted for publication. The content of the Journal covers all aspects of economics and social sciences including but not limited to mainstream to heterodox approaches. The Journal aims to meet the needs of the public and private sector employees, specialists, academics, and research scholars of economics and social sciences as well as undergraduate and postgraduate level students. The Florya Chronicles offers a wide spectrum of publication including

- *Research Articles*
- *Case Reports that adds value to empirical and policy oriented techniques, and topics on management*
- *Opinions on areas of relevance*
- *Reviews that comprehensively and systematically covers a specific aspect of economics and social sciences.*

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From the Editor

Our second issue of the Florya Chronicles focused on Africa Turkey relations, and it has received positive comments. It is the one and only selection of academic articles focusing specifically on Africa ever published in an academic journal in Turkey. The sense of achievement that issue has given us has been tremendous, and we have decided to re-visit such an attempt in the future to publish a selection of articles on one particular topic.

In this third edition of the Florya Chronicles, even though we have a variety of topics, we have a selection of very powerful contributions.

The first article focuses on demographic change in Bangladesh and its impact on economic development. This article by Rashed Al Mahmud "Titumir and Md. Zahidur Rahman explores the dynamics of changes in the age structure of the population and investigates their implications for economic development in Bangladesh. This type of work has previously been carried out against the background of a developed country setting, but existing literature is very thin on the implications of age structure in developing countries. As opposed to other microeconomic choice theoretic literature, which restricts objective understanding of demographic change and economic development, this article proposes a comprehensive framework stipulating that Bangladesh is in an intermediate stage of its demographic transition, which is supposed to be marked by a productive phase of 'demographic dividend' and could affect economic growth principally through changes in the composition of the labour force. The article concludes that the development performance of Bangladesh has been lower than the level of expectation because it has not fully taken advantage of the age structure of its population.

The second article focuses on the Greek economy. Since 2008, the case of Greece has attracted considerable academic attention due to its pivotal position within the unfolding of the EU financial crisis. In contrast with other troubled economies of the EU, from 2013 onwards Greece continued to be an exceptional case, as it has ended up with bailouts and additional financial support. This interesting article by Lalita Som focuses on the EU-

IMF economic adjustment programme aimed at reducing Greece's public deficit and debt, primarily focusing on severe cuts in public expenditure and structural reforms in the country. The article further explores the social cost of the austerity measures in the form of extensive fiscal consolidation and internal devaluations. Accordingly, the article stresses that Greek society has experienced declining incomes and exceptionally high unemployment. Through a comparative set-up, the paper investigates why the economic adjustment policy has been so inadequate in addressing Greece's financial and structural weaknesses.

The third paper by Brendon J. Cannon addresses Turkey's interaction with sub-Saharan Africa. This very interesting paper looks at Turkey's recent engagement with sub-Saharan Africa and tries to answer a set of questions, including "Why Africa?" and "Why now?" The paper seeks to answer these questions by referring to two key variables: structural/political economy factors within Turkey and within various African states; and African reactions to Turkey's engagement. The paper uses a comparative approach to investigate the contours of Turkey's engagement with Kenya and Somalia. It argues that Turkey's commitment of resources to Africa has been positively shaped by a variety of factors, amongst which the risk-taking factor of the Turkish government and Turkish businesses plays an important role. It also argues that a mutually beneficial engagement, largely depends on political, economic, and social factors. The paper highlights the challenges that need to be positively addressed by Turkey in order to become an indispensable partner not only for Kenya and Somalia but also potentially for much of eastern and southern Africa.

The fourth article by Alina Taran focuses on Romania's insolvency practices. This cutting-edge article comes at a time when the Romanian landscape has been shaken by anti-corruption demonstrations. The paper analyses the curent economic set-up with an eye on the liquidity shortage, and it explores why and how firms have been caught with a debt re-payment incapacity. This is an empirical paper using empirical testing methodology. The paper looks at the firms' financial situations before the moment of entry into insolvency and during insolvency proceedings, in comparison and it compares these firms with non-distressed companies. The paper discusses insolvency problems, with regard to predicting them

through an analysis of their symptoms by using an assessment method that analyses insolvency risk against the background of a sample of companies from Romania that are listed on the Bucharest Stock Exchange Market.

The fifth paper by Onur Özdemir covers a rather neglected area of finance and its relations to the real economy. The relationship between the sphere of finance and the real economy is studied by referring to specific conditions that emerges during crisis periods. The paper concentrates on three distinct approaches by: drawing on the works of Minsky, Croty, and Schumpeter. This literature is investigated in order to uncover three items: the roots and reasons of financial crises; what roles money, credit, and financial intermediation have played during the crisis period in question; and to what extend Marx's theory of crisis stands relevant to the explanation developed by these distinct approaches. Finally, the paper brings in Schumpeterian debate on excessive production as the core cause of financial crisis and aims to tie in the concept of 'creative destruction' to the analysis of the dynamics of capitalist crises.

We would like to express our gratitude to the President of the Board of Directors, Dr. Mustafa Aydın, for his trust and continued support; to the Rector of Istanbul Aydın University, Prof. Dr. Yadigar İzmirli; to our Dean at the Faculty of Economics and Administrative Sciences, Prof. Dr. Celal Nazım İrem; and to our colleagues and the production team.

Prof. Dr. Sedat Aybar
Editor

Changes in Population Age Structure and Economic Development: The Case of Bangladesh

Rashed Al Mahmud TITUMIR[1]
Md. Zahidur RAHMAN[2]

Abstract

Using the case of Bangladesh, this article critically explores the dynamics of changes in population age structure and their implications for economic development. It argues that the existing literature, though rich and covering a wide range of issues, is highly fragmented. The existing literature either narrowly focuses on population growth vis-à-vis economic growth; concentrates too much on empirical estimation of 'dividend'; makes justifications for policy interventions; or concentrates on restricted microeconomic models of choice and rationality to understand demographic change. This article attempts to propose a comprehensive framework that stipulates the relations amongst changes in population age structure, demographic transition, and economic development in the contexts of developing countries. Per the proposed framework, Bangladesh is positioned in the intermediate stage of its demographic transition, which is supposed to be marked by a productive phase of 'demographic dividend' and could affect economic growth principally through changes in the composition of the labour force, as conditioned by a number of policy variables. Using this framework, the article finds the recent development performance of Bangladesh to be lower than expected, as it has not been able to fully capitalise on advantageous changes in the age structure of its population. This paper also identifies a number of challenges in terms of harnessing economic growth to be more job-intensive in productivity sectors, enhancing quality of labour and formation of skills, and expanding the productive capacity to absorb a growing labour force. All of these have useful implications for other developing countries in similar socio-demographic conditions.

Keyworlds: *Population Change, Demographic Dividend, Economic Development, Bangladesh.*

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INTRODUCTION

This article explores the dynamics of changes in population age structure during demographic transition and their implications for economic development as illustrated in the case of Bangladesh. Population has always been one of the most debated aspects of economic development, especially with reference to the relations between demographic variables and economic growth. An evolving consensus acknowledges that there exists a two way linkage between population change and economic growth, and both are affected by each other during the process of demographic transition and economic transformation (Bloom, Canning, & Malaney, 2000). The existing literature can be compartmentalised into four different approaches to understanding population change and economic development: studies that have remained prisoners of the past by confining themselves to the historical legacies of Malthusian ideas about adverse economic consequences of population, as a result focusing too narrowly on population growth vis-à-vis economic growth; studies that have concentrated too much on empirical estimation of the dividend effects of population age structural change on economic growth; studies that have provided justification for finding the validation of policy interventions; and studies that have concentrated on microeconomic models of choice and rationality, overlooking the broader institutional factors that greatly condition demographic transition and its consequences on an economy. Though the existing approaches to population-development interaction are is rich and cover a wide area of study, the current literature broadly appears to be fragmented in nature. This article makes an attempt to propose a comprehensive framework that integrates recent approaches and formalises the relations amongst changes in population age structure, demographic transition, and economic development in the context of developing countries.

Since most developing countries are currently undergoing a demographic transition characterised by rapid decline in mortality and fertility rates, the impact of changing population age structureparticularly what is termed as ‘demographic dividend’ on the economy has attracted much attention from economists and demographers recently (Hock & Weil, 2012; Lee & Reher, 2011; Mason, 2005; Lee, 2003; Bloom & Williamson, 1998). The essence of these studies is that demographic shifts in population

age structures have crucial implications for economic growth and social development. Understanding the relationship between population age structure and economic development is worthwhile because it provides empirical assessment of the current population-development scenario and allows useful predictions about the future courses of change. Second, the relationship between age structure and economic growth has been found to be strong and significant in a number of contexts in both developed and developing countries (Pool, Wong, & Vilquin, 2006; Feyrer, 2008).

This article follows a proposed framework to study population dynamics in Bangladesh as it relates to economic growth and social development following. For a number of reasons, the case of Bangladesh is compelling. It is a small developing country that ranks 94th in terms of its geographic area but also ranks 8th in terms of its population size. With an estimated population of 161 million in 2015, it is one of the most populous countries in the world (United Nations, 2015). Among all developing countries, Bangladesh is considered to be a "special case" due to its unprecedentedly high population density and its poor socio-economic status. The country is seemingly facing a very challenging situation, as the current population density is five times higher than any other country with a population of over 100 million (Streatfield & Karar, 2008). Contrary to this gloomy picture as portrayed by high figures of population size and density, a more promising account can be found by looking at the composition of the population and dynamics of changes in its age structure. For example, the total population of Bangladesh is undergoing a dynamic transition in which the proportion of the working age population (i.e.15-6 years of age) is increasing, with much potential for productive growth. This trend offers an opportunity to accelerate the pace of economic development in Bangladesh.

Against this backdrop, the article provides an examination of the economy, its growth pattern, and economic structures to reveal Bangladesh's standing in capitalising upon opportunities created by inevitable yet fairly predictable changes in the population age structures. A look at the structure of the economy of Bangladesh, however, seems to suggest that the country has not been able to derive much benefit out of advantageous changes in its population age structure. It can be emphasised that these challenges could loom large if adequate actions are not put in place to harness the potential

gains from changes in age structures.

The rest of the article is organised as follows: the first section critically reviews the literature on population-development dynamics and proposes a framework that links changes in age structure with economic development, and latter sections provide analysis of Bangladesh's recent development performance and major impending challenges in light of the proposed framework.

POPULATION DYNAMICS AND ECONOMIC DEVELOPMENT: A REVIEW AND A FRAMEWORK

The linkages between population dynamics and socio-economic development have been debated as far back as Malthus. The linkage between demographic variables and economic growth has always persisted in both academic and policy debates. It is now acknowledged that population dynamics and development are both compound phenomena and do not interact in a straightforward way (Hayes & Jones, 2015). There exist two- way linkages between population change and economic growth, with one affecting the other and vice versa (Bloom et al., 2000). The pace and pattern of economic and social transformation implicate the process of demographic transition, whereas different stages of demographic transition have their consequent implications on economic growth and development. The nature of the relationship is, however, much debated among researchers, and the focus of these debates has shifted from a narrow view of population growth vis-à-vis economic growth towards a more dynamic and macroeconomic analysis of the implications of the changing age structure of population on economic development (Headey & Hodge, 2009; Mason, 2005).

This article categorises these debates into four major approaches. The first one is described as the 'historical legacy approach', which has its origin in the ideas of Malthus. In An on the Principle of Population (1978), Malthus posits that rising prosperity will be accompanied by increasing fertility and rapid population growth, which will ultimately result in widespread poverty and starvation, as food production will not be able to keep pace with the exponential growth of population. This view has its contemporary adherents, who have remained prisoners of the past pessimism of Malthus.

During the 'age of development' between the 1950s and 1990s, the problem of population was considered as a massive, urgent, and paralysing pressure on the economies and societies of poor countries (Coale & Hoover, 1958; Ehrlich, 1968; Crenshaw, Ameen & Christenson, 1997; and Sachs, 1997). The neo-Malthusian resurgence during this time held the view that the economy might succumb to a "population-poverty trap", and to counter this pessimism, the majority of attentions and resources (both intellectual and material) was devoted towards halting population growth (Ehrlich & Holdren, 1971). Population control, family planning, and massive public policy interventions have achieved this objective of significantly reducing the population growth rate (UNFPA, 2015). Nevertheless, this scholarship has disturbingly created an impression that large populations are the source of many problems with and is burdens on the economy.

While this pessimism was not entirely unfounded, it undermined proper understandings of the productive role of population on the economy of a country. As a result, a group of observers adopted a more 'positive' view of population, citing the roles of human capital formation, innovation, agricultural revolution, and technology development (see, for example, Boserup, 1981; Kuznets, 1967; and Simon, 1981), while another group took a 'neutral' position regarding the role of population in development. This latter group found little to no significant association between population growth and economic development, based upon regressions of per capita income growth on population growth using cross-country data sets (Kelley & Schmidt, 1995; Barlow, 1994; Bloom & Freeman, 1988). This approach, however, took a rather narrow view, focusing only on the effects of population variables such as growth rate, size, and density on economic growth.

The former approach portrays population as a productive force, stating that the per capita productive capacity of the country expands as working age population grows much faster than the dependent population. New evidence has provided strong support for the positive and significant role of population in augmenting economic growth, which has been termed as 'demographic dividend' (Bloom & Williamson, 1998; Mason, 2005). While rapid population growth is widely considered to have a negative pressure on the economy, nevertheless, past approaches failed to indentify

when population growth may become beneficial for economic growth. Alternatively, taking into account the growth of the labour force, it has been found that aggregate population indicators hide more than they reveal. That is, the growth of the adult working age population promotes economic development with appropriate policy inducements, whereas the growth of the populations of children and the elderly results in the opposite (Headey & Hodge, 2009; Crenshaw et al., 1997).

This 'dividend estimation approach', as is termed here, has shifted the focus from aggregate population growth variables to the dynamics of population changes as they affect the population age structure and has changed the direction from 'economic development to population growth' to 'population growth to economic development' (Walker, 2014; Guinnane, 2011; Lee, 2003; 1998). This approach notes that changes in population age structures comprise "the mechanism through which demographic variables affect economic growth" (Bloom & Williamson, 1998). For example, Bloom and Williamson (1998) have found that the 'dynamics of population changes' affect economic growth through changes in the age structure of the population rather than through the aggregate rate of growth of the population. This claim was substantiated by empirical findings that showed that population dynamics explained much of the economic 'miracle' of the 'East Asian Tigers', as around one-third of their economic growth from 1965 to 1990 was due to favourable changes in their population age structures (Bloom & Williamson, 1998). Further, about 15 to 25 percent of the economic growth in China between 1980 and 2000 was estimated to be due to demographic factors (Wang & Mason, 2008). This approach, however, concentrates too much on empirical estimation of the magnitude of dividends and most frequently studies diverse groups of countries together without adequate attention to the specific context of a particular country.

The third approach is quite similar to the dividend approach but slightly differs in its strong emphasis on institutional conditionality. Here it is called the 'policy success approach', as it regards the dividend period to be merely a 'window of opportunity' with potentials rather than a guaranteed gain of faster economic growth. While a number of studies have found that demographic changes have significant but varied implications for

economic growth and social development, this approach stresses that there is no deterministic relationship between demographic change and the economy (UNECA, 2013; Headey & Hodge, 2009). This means that a certain type of change in the demographyfor instance, a relative increase in the share of the working age population would not directly lead to higher economic growth; rather, the positive effects of the demographic dividend are decidedly dependent on pursued policies. This is evident from the well documented experiences of Southeast Asian countries (Bloom & Williamson, 1998;, Mason, 2001). Further, studies on African countries provide strong evidence that without good institutions and an enabling policy environment, much of the potentials offered by favourable changes in age structure cannot be translated into faster economic development (Bloom, Canning, Fink, & Finlay, 2007). A poor institutional environment and the absence of responsive policies also explain why several underdeveloped regions have derived little to no dividends from the rising share of working age population. For example, Indian states such as Bihar, Madhya Pradesh, Rajasthan, and Uttar Pradesh have performed more poorly with regard to socio-economic indicators compared to the more developed states of India (Thakur, 2012). This approach seems to provide much justification for policy interventions.

The final approach, termed the 'microeconomic approach', assumes the importance of choice and rationality. The microeconomic theory of fertility decline sees children as consumption goods and takes into account their relative costs, a couple's income, and alternative forms of consumption in explaining the decline in fertility as a function of individual choice (Becker, 1960; Schultz, 1973). This microeconomic model links fertility choices with other economic variables like consumption and labour force participation. These neo-classical economists explain decline in fertility by formalising an inverse relation between level of income and number of children and a positive relation between the quality of the life of the child and income (De Bruijn, 2006). While Becker (1960) contributed to the demand side of fertility transition, Easerlin's (1975) approach later added sociological variables like supply of children as well as the effects of age cohorts on fertility. These formulations do not consider the role of social and institutional factors that shape individual fertility choices (Mason, 1997).

The microeconomic theories have received criticism partly because of their narrow and individualistic notion of choice and their restrictive understanding of rationality and partly because of their overlooking of the socio-cultural and political determinants of fertility decisions (De Bruijn 2006). Mason (1997) asserted that a combination of socio-cultural, environmental, and institutional forces and factors cause fertility transition and added that the micro-economic theories provided little insights on demographic transition in terms explaining broader institutional implications. Given that a large body of literature has detailed the transition process along with the decline in mortality and fertility, emphasis is not placed on the causes but on the macroeconomic consequences of age structure changes during and even after the transition process (see Lee (2003) for a detailed discussion).

The preceding review of four major approaches reveals that these approaches cover diverse issues but are lacking coherence. To address the fragmented nature of these different approaches to understanding the relationship between population change and economic development, this article proposes a framework that brings synergies to different variables. The framework outlines three major stages of shifts in population age structure during demographic transition as it relates to economic development by locating the relative position of key variables that affect economic development, such as labour and capital. It must be acknowledged that this is not an entirely new formulation but instead offers an integrated approach. Before outlining the framework, a brief discussion of demographic transition and life cycle theories of consumption is required.

Demographic transition is a worldwide phenomenon that has been experienced by all countries in the world and studied extensively in several fields of the social sciences. The theories of demographic transition were formulated first by observing the historical experiences of population changes and development in Western industrialised countries and later substantiated with a large body of evidence from developing countries (Kirk, 1996; Chesnais, 1992). Demographic transition is a gradual process

[1] *For example, Lee (2003) asserted that "patterns of change in fertility, mortality and growth rates over demographic transition are widely known and understood. Less well understood are the systematic changes in age distribution that are an integral part of the demographic transition and that continue long after the other rates have stabilized" (p. 180).*

of population change that starts typically with a reduction in mortality rates followed by a fall in fertility rates. The middle period between the fall in mortality and fertility rates is marked by rapid population growth leading to a natural increase of the population size. Eventually, the decline in the fertility rate stabilises the growth rate of the population (Lee, 2003). Before the beginning of the transition process, there is a high birth rate along with a high death rate, with each offsetting the other and thus keeping the total population at a relatively stable size.

The demographic transition typically passes through a number of phases, and each features dynamic changes in the population age structure. During this gradual process, the age structure of the population shifts as popularly pictured through an initial bottom heavy 'pyramid'-shaped population structure with a large concentration of younger ages and a narrow 'dome'-shaped population structure with older individuals outnumbering the younger individuals at the end of the transition process. As Lee and Reher (2011) observed, "the transition transforms the demography of the societies from many children and few elderly to few children and many elderly", while the transient period between these two phases experiences an increase in the share of the adult working age population. This period might last for several decades. This transitory period has significant implications for economic development that will be elaborated later in this article.

Life cycle theories of consumption and production add insights. Bloom, Canning, & Sevilla, (2003) have shown young and old people consume more than they produce, if any, in the form of education, healthcare, and retirement expenditures. The adult working population supplies labour, produces more than it consumes, and saves for its future consumption. As the relative share of these working and dependent populations changes, it changes the overall economic scenario of the country. Bloom et al. (2003, p. xi) have explained that "[b]ecause people's economic behaviour and needs vary at different stages of life, changes in a country's age structure can have significant effects on its economic performance". Hence, looking at the challenges and opportunities created by present and future changes in demographic age structure provides useful insights about its effect on socio-economic development.

Informed by the preceding explications, this article has outlined three phases of demographic transition (in Table 1) by taking into account the changes in the relative size of the major population age groups and dependency ratio. While in conventional demographic transition theory, there can be at least five stages, with each defined based on the state of demographic variables such as mortality rate, fertility rate, and population growth rate, in this framework, the article has considered changes in population age structure to reveal its implications for economic development. Each stage of demographic transition provides a unique set of challenges and opportunities that can be seized to augment faster economic growth and social development. Failing to seize these opportunities will mean that challenges will prevail and the prospect of economic development will be compromised.

Table 1. *Demographic transition, changes in age structure, and implications for development*

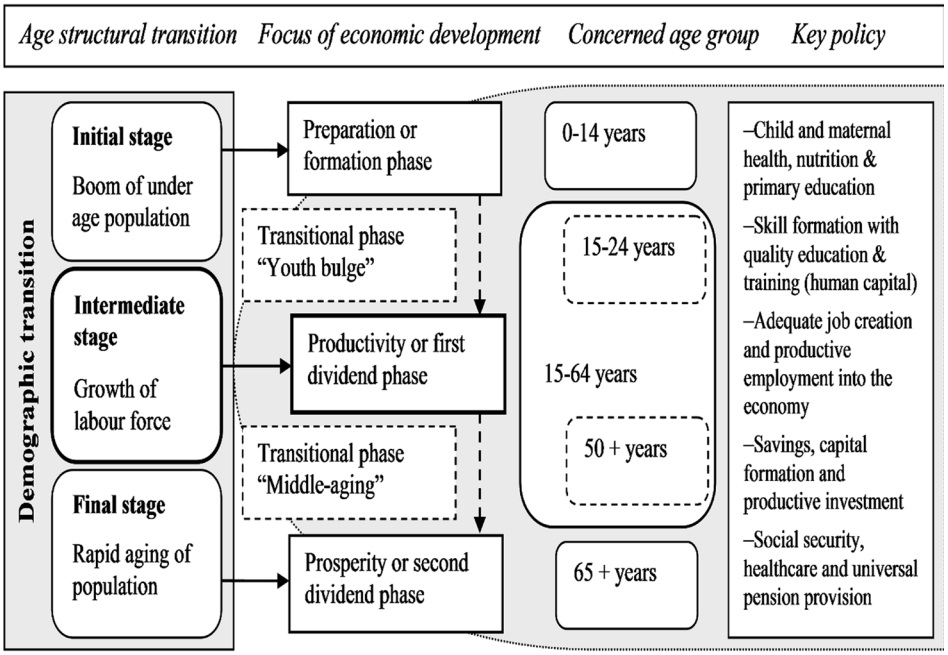
Initial stage	**Key stylized fact: Increase in the proportion of children and child dependency ratio** (*Span of this period: (30 to 50 years, but effects continue even longer)	
	Challenges: Rising expenditure; expanding institutional capacity and required infrastructure; adopting relevant policies for meeting educational, health, and nutritional needs of large proportion of children	**Opportunities:** Forming human capital by ensuring the supply of educated, healthy and skilled labour force; utilising untapped potential of girls' education
Intermediate stage	**Key stylized fact: Increase in the proportion of working age population and decrease in the total dependency ratio to its minimum** (*Span of this period: (40 to 60 years with variations among groups of countries)	
	Challenges: Expanding productive capacity of the economy; attracting investment; creating employment; addressing unemployment; rising inequality and falling capital labour ratio; adopting 'job-rich' growth enhancing policies for rapidly growing working age population	**Opportunity:** Passing period of demographic dividend with 'window of opportunities'; unique economic advantage of having large labour force; accelerating economic growth; accumulating capital; and mobilising savings; and capitalising on female labour force participation

Final stage	**Key stylized fact: Rapid increase in the proportion of elderly population along with old-age dependency ratio and total dependency ratio** (*Span of this period: (indeterminate – continues even after the completion of transition)	
	Challenge: Rapid aging of population; ensuring social security of elderly population; providing health services for elderly; increased burden on the working age population as well as government to support the elderly from private transfer or public pensions	**Opportunity:** Continuing increased and sustained economic growth employing savings and wealth accumulated in earlier phase (second dividend); rising capital labour ratio; stimulating labour productivity growth due to capital deepening

Source: Prepared by the authors based on different literature, particularly drawing on Lee (2003) and Mason (2005).

It has been well established that age structure is the mechanism through which population variables affect economic growth, with three possible channels of impact in the form human capital, labour supply, and savings (Bloom & Williamson, 1998). To comprehensively capture the relations between changes in population age structure, demographic transition, and economic development, a framework has been developed (Figure 1). It formalises how age structural transition creates imperatives for economic development during the progressive phases of demographic transition in a country. The transmission mechanism and properties of each of the three stages are delineated in the following sections based on the current level of understanding in the available literature, with primary emphasis in the context of developing countries, which are currently undergoing the initial or intermediate stages of their demographic transitions.

Figure 1. *Age structural transition and economic development: A framework*



Source: Prepared by the authors based on Table 1

Initial stage, or the formation phase

At the initial stage of demographic transition, the shape of population age structure is dominated by the large proportion of children, making up a young dependent population that is in need of food, nutrition, clothing, housing, education, and health care. A large share of private and public expenditure is needed to cater to the needs of this young population, but most governments and families struggle to meet these challenges. This phase is also critical as it provides opportunity for human capital formation by making adequate investments in quality education, skills development, and the improved health of children who will enter the labour force in the next phase.

As it relates to economic development, the initial stage of age-structural transition is essentially the preparation or formation phase that builds the foundation for reaping dividends in later stages. The age group concerned is

below 14 years of age. A key proposition of this phase holds that increased labour supply is not likely to boost economic growth unless improved health conditions, quality education, and skill formation are ensured in line with the structural transformation of the economy.

Intermediate stage, or the productivity phase

During this stage, the concentration of the population shifts to prime working ages. This creates an increase in the economically productive population, which consumes less than it produces and also saves for its consumption in old age. The dependency ratio reaches its minimum, and the large size of labour force creates a 'window of opportunity' for faster economic growth. This reduces the economic burden of bringing up children and also tends to improve prospects for girls in families with fewer children and responsibilities. The female working age population becomes economically active, enters the productive sector, and contributes to the growth of the economy. Unlike in previous phase, enough resources become available for investment in productive activities, generating the faster growth of the economy and the consequent rise in the per capita income of the country (Mason & Lee, 2007). As the number of dependents per worker decreases, the per capita income raises, a relationship found to describe 22 percent of the case of India (Lee, 2003, p. 182). This period, however, may also experience rising inequality (Osmani, 2015) and a falling capital labour ratio (Coale & Hoover, 1958) as the number and proportion of the working age population peaks.

This stage marks the productivity or 'first dividend' phase and is a crucial in determining a country's path of economic development. As the shifts in age structure create a bulge in working age population and particularly in youth population, this phase simultaneously provides huge potential and daunting challenges to cater for a growing labour force both in relative and absolute terms. The larger working age population of people aged 15-64 include a 'youth age group' (between 14 ad 24) and a middle-age group (above 50 years of age). These groups warrant priority policy attention. For the first group, the challenge is to ensure a smooth transition from education to employment by matching levels of skills with appropriate jobs in growing and productive sectors of the economy. Creating a favourable environment for savings and investment along with incentivising the

middle-age group, who tend to save more, also requires prioritisation. Some key propositions of this stage hold that the additional and growing size of the labour force will not generate higher economic growth unless they are employed productively. The realisation of the maximum potential economic growth is less likely to be achieved without a threshold level of capital deepening in the economy.

Final stage, or the prosperity phase

This stage experiences the aging of the population as the large cohort of the working age population gets older and again becomes dependent. This raises the overall dependency ratio and puts economic burden on the shrinking working age population. For governments and families, greater resources are required to take care of the elderly population. Population aging is a grave concern for most of the high-income countries, which are now at the final stage of their demographic transition. For example, the rapidly aging population in Japan is the cause of serious economic challenges as it reduces the savings rate and increases social security and healthcare costs (Hurd & Yashiro, 2007). The consequence of population aging will be similar or even worse for developing countries as well if they do not have sufficient savings before they get older (UNFPA, 2015). This is likely to reduce the rate of aggregate savings as shown by the life cycle savings model (Browning & Crossley, 2001). Nevertheless, provided sizable capital accumulation during the previous phase, the capital labour ratio may increase in the final stage due to the dwindling size of labour force, though the current savings rate may become lower (Cutler et al., 1990; Lee et al., 2000). The resultant capital deepening may expedite labour productivity growth and sustain improvements in standards of living. Nevertheless, this would depend on the extent of savings mobilisation and capital accumulation by inducing private savings or by devising institutional requirement – or both – as was the case found in Singapore (Lee, 2003, p. 183).

Depending on the economy's performance during the earlier two phases, the final stage promises a prosperity or 'second dividend' phase when economic growth can withstand the challenges of population aging and a shrinking labour force if increased savings and capital deepening can stimulate labour productivity in the economy. The age group concerned in

this stage is the population above 65 years, which would incur increasing resource costs irrespective of the level of institutional capacity to support them. The main proposition of this stage holds that economic development will not be inclusive and sustainable unless comprehensive social security, including a universal pension system, is developed in a country.

Transitional or transformation phases

To take full advantage in augmenting economic growth during the intermediate stage when population age structure changes favourably as the working age population starts to increase relative to the young and oldpopulations, the structure and capacity of an economy must be expanded to generate productive employment for absorbing the growing size of the labour force. Starting from the formative phase and throughout the productive phase, sufficient investments are to be made to transform the 'youth bulge' into human capital by providing required education and training to adequately meet market demand and the requirements of the expanding economic sectors.

If efforts to reap the benefit of the first dividend are successful, then there will be a sizable increase in the population's per capita income. Moreover, since middle-age populations are most likely to save portions of their current income to maintain their level of consumption in the future, a rise in the size of this age group creates greater prospects for savings, which will result in capital formation and the accumulation of wealth. If a country can harness the change in the population's saving and investment by creating a positive environment for investment,it can achieve a sustained level of economic growth, which is defined as the 'second demographic dividend'. The benefit of the second dividend is usually larger than the first and can last much longer (Mason, 2005). For this to happen, economic policies must be directed using the appropriate methods by coinciding individual incentives with the higher growth trajectory of an economy (Lee & Mason, 2006). Thus, it is necessary to stress that advantageous demographic changes will not automatically generate higher economic growth; rather, economic opportunities arising out of demographic changes must be capitalised upon through required institutional and policy responses.

The final emphasis is that economic outcomes are not only dependent upon

appropriate pursued policies but also equally conditional on timely execution of those policies during particular stages. As the notion of 'transitional phases' implies, there is no clear-cut demarcation between any two stages, and that is why appropriate policies are crucial for fully leveraging theeconomic potentials of population changes during the intermediate phase. These challenges as well opportunities, as the article outlines, have particular relevance to developing countries, as they are presently passing through the initial or intermediate phases of their demographic transitions (Mason, 2005). Currently being in the intermediate stage of demographic transition, Bangladesh has experienced rapid growth in its labour force, and its dependency ratio has decreased, which is offering an opportunity for realising demographic dividend in the country,albeit with impending challenges relating to equipping and utilising its growing labour force.

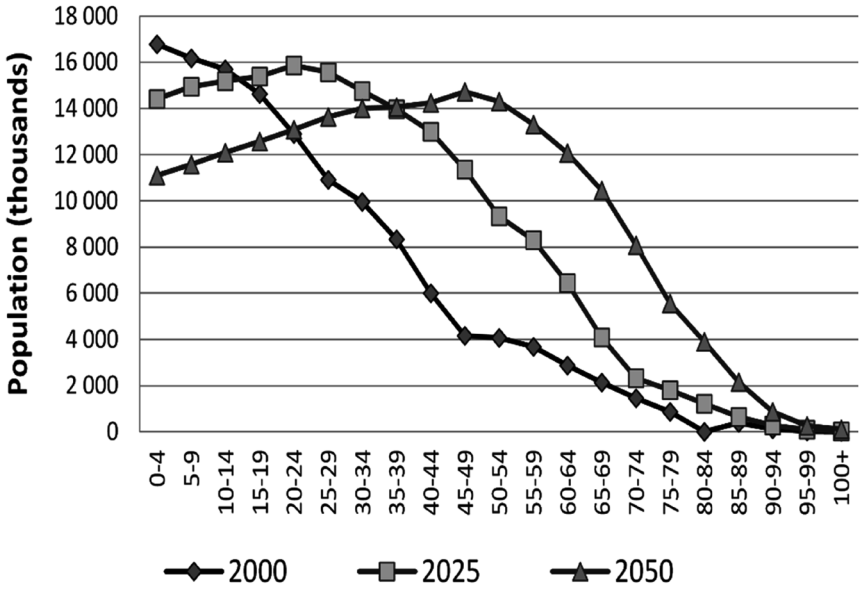
DEMOGRAPHIC TRANSITION AND CHANGES IN POPULATION AGE STRUCTURE IN BANGLADESH

Bangladesh is a lowermiddle-income country located in South Asia and neighbouring population giants like India and China. Like other countries in this region, Bangladesh started its demographic transition in the early decades of twentieth century when it was a part of the Indian subcontinent still under British dominion. Although the mortality rate began to decline in the 1920s, the transition did not gain momentum until the country gained its independence from Pakistan in 1971 (UNFPA, 2015). The fertility transition or steady decline in the fertility rate started from the mid-1970s, around which it reached a maximum 6.92 children per woman in the 1965-70 period and then decreased substantially to 2.4 children per woman in the 2005-10 period, with a more than 65 percent reduction from the 1965-70 level. The population growth rate has also declined significantly during this period. It was found that a combination of factors and forces including public health interventions, rising income and education, and changing poverty dynamics, among others contributed to the decline in fertility (Adnan, 1998).

During the course of the demographic transition, Bangladesh has been undergoing dynamic changes in its population age structure as stipulated by the age structural transition model. In Figure 2, the demographic transition and the consequent changes in the agestructure of the population of the

country are shown for the years of 2000, 2025, and 2050. It is apparent that the highest concentration of the population is shifting from children to the working age to the elderly population across these years.

Figure 2. *Shifts in population age structure in Bangladesh, 2000, 2025, 2050*

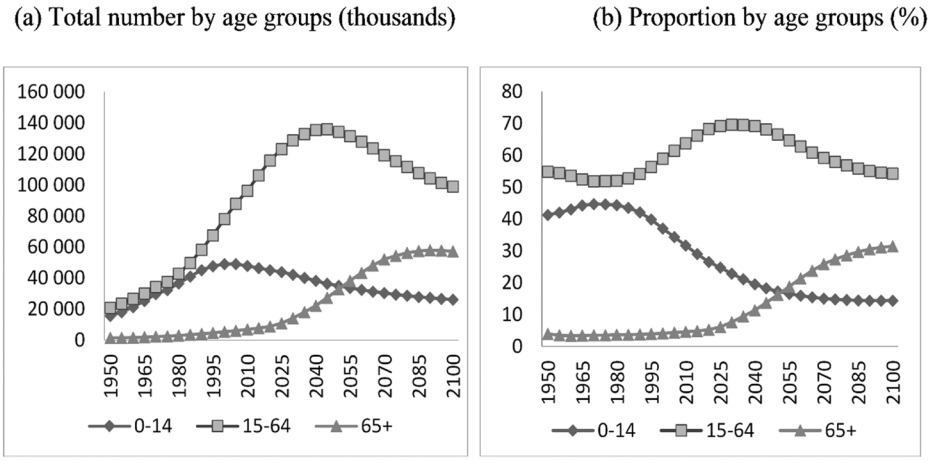


Source: UN (2015) World Population Prospects: The 2015 Revision

At present, Bangladesh has a youthful age structure with almost 52 percent of Bangladeshis belonging to below 24 years of age and 32 percent under 15 years of age. Although Bangladesh has achieved a significant reduction in its mortality and fertility rates, the proportion of the youth population will remain high in the age composition of the country for at least the next three decades due to what is called the 'population momentum effect'. For instance, the proportion of the working age population has increased from its lowest point of 51.9 percent in 1970 to 63.7 percent in 2010 a 22.74 percent increase. The UN projects that it will peak at 69.6 percent in 2030 followed by a period of gradual decline. In contrast, the proportion of the young population (aged 0-14) has decreased 29.08 percent, from its highest point of 44.7 percent in 1970 to 31.7 percent in 2010. The UN

projects that the young population will be around 20 percent of the total population in 2040, after which it will decline further before stabilising during the 2080s (UN, 2015).

Figure 3. *Total Number and Proportion of Young, Working-age and Old Population in Bangladesh (Medium Variant), 1950-2100*



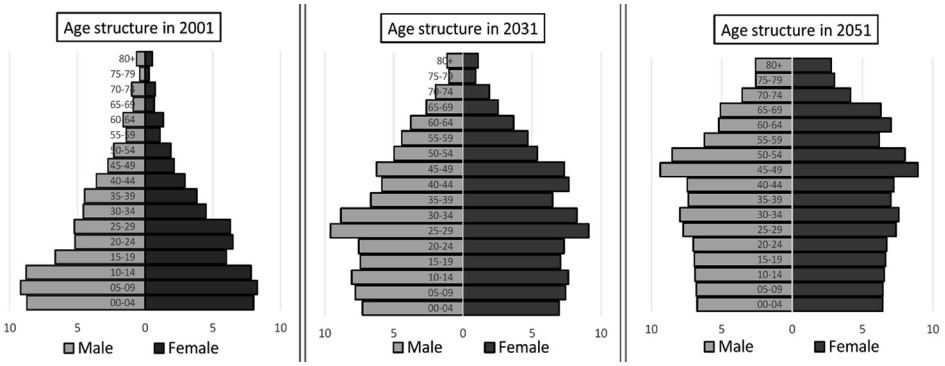
Source: UN (2015) World Population Prospects: The 2015 Revision

During the last couple of decades, the proportion of older population aged 65 years and above remained quite low at around four to five percent of the total population. However, the future trend indicates that this situation will reverse with a rapid increase in the number of older population and a gradually declining young population. Projections based on UN (2015) data reveal that the share of the old population will double from its present size by 2035, becoming 9.4 percent of the total population; it will continue to increase at a faster rate thereafter, becoming 16.2 percent by 2050 and, finally, 31.4 percent by 2100.

In contrast, the consequent share of the working age population will start to decline more visibly from 2040 on, decreasing to 14.6 percent by 2070 and declining evenfurther thereafter, though at a decreasing rate. It is predicted that due to the declining and then negative population growth rate, the size of the working age population will start to decrease mostly from 2040,

and this trend will be intensified by the acceleration of population aging during the post-2050 period. These changes in the age structure are also evident from the gradually increasing median age of the population, as it is projected to increase from 24 years in 2010 to 28.4 years in 2020, 33.8 years in 2030, and 36.1 in 2040, with a further increase throughout the following decades. Population pyramids most vividly illustrate these changes in the age structure of the population over time. Figure 4 shows the gradual changing shapes of the three population pyramids of Bangladesh in 2001, 2031, and 2051.

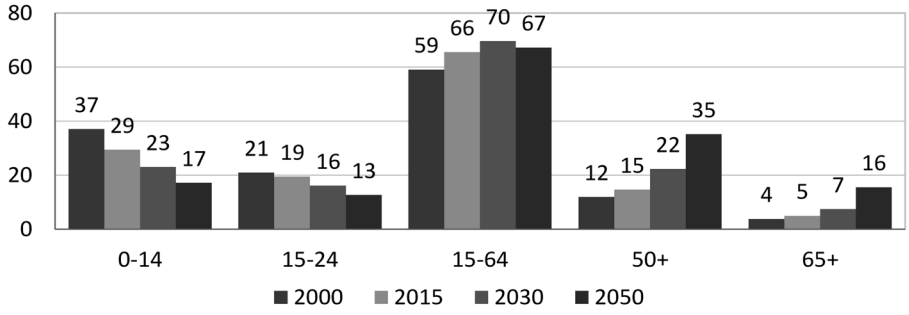
Figure 4. *Population Pyramids and changes in age structure in Bangladesh*



Source: Prepared by authors based on BBS (2015b)

The transformation of the population age structure in Bangladesh resembles a classic pyramid shape in the early 2000s, indicating a high concentration at the bottom of the pyramid, while in 2031, the age structure seems to be an onion-like shape indicating that the relative share of the working age population increased. Future projections show that by 2051, the share of the older population will continue to rise relative to the young and middle-age populations due to a lower or negative fertility rate and increasing life expectancy. These dynamic changes in the relative share of key age groups in Bangladesh are shown in Figure 5.

Figure 5. *Percentage of total population by selected age groups in Bangladesh*



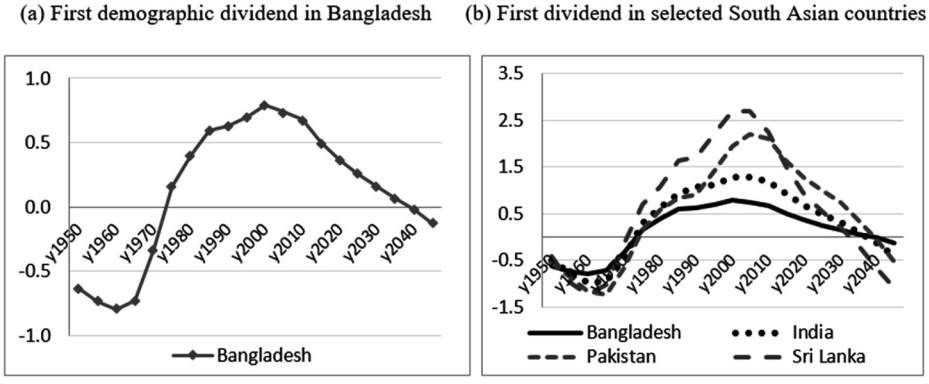
Source: UN (2015) World Population Prospects: The 2015 Revision

Based on the above analysis, several trends can be expected to happen in next three or four decades that should be taken into account when deciding the course of economic development of the country. First, the share of young dependent population aged below 14 years is decreasing at a faster rate, but this age group will still comprise 29 percent of the total population, implying that a sizable amount of resources is needed to cater for their human capital development. Second, the share of the working age population (15-64 years) is increasing considerably, with a higher bulge in the young population aged below 24 years. This trend will prevail until 2050, providing considerable opportunities for taking benefit from a larger labour force while equally posing challenges of absorption in productive sectors and employment creation in the economy. Third, the share of the older population (approximately more than 5065 years) will start to increase considerably from 2030s on, and it will constitute a major proportion claiminga large share of resources in terms of social security and old age benefits in the following few decades.

DEMOGRAPHIC DIVIDEND, ECONOMIC GROWTH, POVERTY REDUCTION, AND INEQUALITY IN BANGLADESH

Demographic variables contribute to economic development through changes in population age structure. After estimating the relationship between changes in population age structure and economic growth among 127 countries for the period of 1950-2010, the World Bank found that a 1.0 percentage point growth of the working age population has led to a rise in per capita GDP growth by 1.1 to 1.2 percentage points (World Bank, 2016). This direct effect of the growing size of the working age population on economic growth is termed as 'first demographic dividend'. As this article has identified, Bangladesh is currently in the intermediate stage of its demographic transition and halfway through the productive or first dividend phase. A number of estimates have been made to approximate the effect of the growing working age population on the economic development in the country (Raihan, 2016; UNFPA, 2015; Mason, 2005). The estimate carried out by Mason (2005) shows that the phase of first demographic dividend with the window of opportunity started in 1975 and will end in 2040. The magnitude of the first demographic dividend in Bangladesh, however, has been the lowest among South Asian countries, as shown in Figure 6.

Figure 6. *First demographic dividend in Bangladesh and in other South Asian countries*



Source: Prepared by authors based on country estimates in Mason (2005)

Overall estimates show that in South Asian countries, the demographic dividend contributed to a rise in per capita GDP growth by 0.80 percent a year during the 1970-2000 period. During that same period, Bangladesh experienced only a 0.46 percent dividend per year (Mason, 2005). Comparatively, Sri Lanka has gained the highest dividend in South Asia, but the magnitude of gains in economic growth due to demographic dividend is lower in Bangladesh than those of India and Pakistan. Other available estimates also found a low dividend in case of Bangladesh (Raihan, 2016). Despite the relatively longer duration of the dividend period, the economic gains that have been realized in South Asia are low in general and even lower in Bangladesh than in most of the East and Southeast Asian countries (Mason, 2005).

Bangladesh has enjoyed a long period of intermediate productive phase and is still left with two more decades, but it so far it has not fully exploited the advantageous changes in its demographic age structure in order to accelerate its economic development. The questions that need to be answered are why the magnitude of dividend has been so low in Bangladesh and how Bangladesh can maximise its gains in the remaining years before demographic advantages turn negative. A selective assessment of the Bangladeshi economy provide some insights in this regard.

Throughout the last several decades, the economy of Bangladesh has been growing at a moderate rate. During the last one and half decades, the average annual GDP growth rate was over six percentage points. Since the population growth rate is below 1.4, the growth rate of per capital GDP has been over 4.5 percent per year. As a result of rapid economic growth, Bangladesh became a lower middle-income country in 2015 and aspires to become a middle-income country by 2021. The trend of the economic growth rate in Bangladesh is commendable in comparison with other South Asian and lower middle-income countries, as shown in Figures 7(a) & (b).

Figure 7 (a). *Real GDP growth and per capita GDP growth in Bangladesh, 1999-2013 (%)*

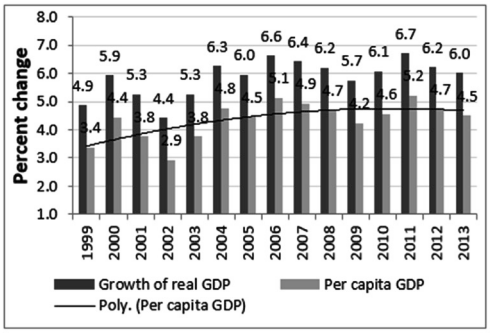
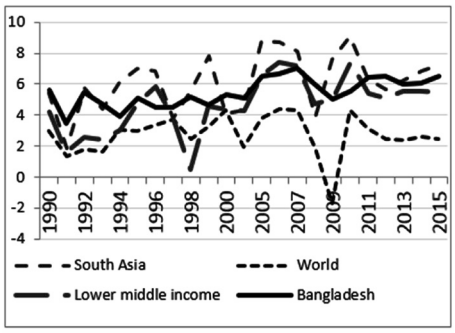


Figure 7 (b). *Trends in annual GDP growth rates (%)*



Source: BBS, Bangladesh Economic Reviews 2002, 2008 and 2015 and World Bank Dataset

Even so, a critical assessment of the growth experience of the country reveals that Bangladesh has actually performed below its potential, and its achievement is quite low compared to countries like China, Malaysia, and South Korea, which were similar to Bangladesh in many respects during the 1970s (Ahmed, 2014). A more careful observation shows that despite fast economic growth during the last several decades, the economy did not experience any major structural transformation, as the percentage shares of the GDP earned by three broad economic sectors – service, industry, and agriculture – remained almost stagnant over recent years, with noticeable growth only in the service sector, as shown in Figures 8(a) & (b) below.

Figure 8 (a). *Growth of GDP by broad economic sectors in Bangladesh (annual %)*

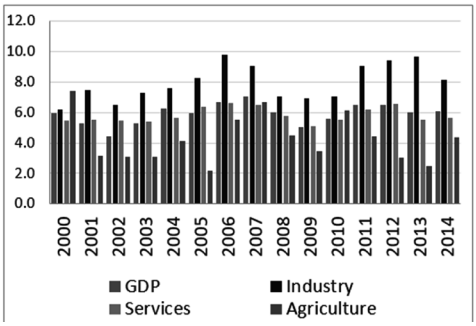
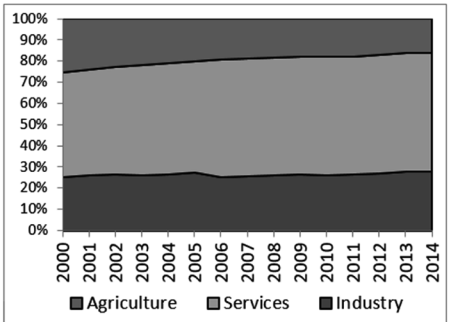


Figure 8 (b). *Structure of output bu broad economic sectors (% of GDP)*

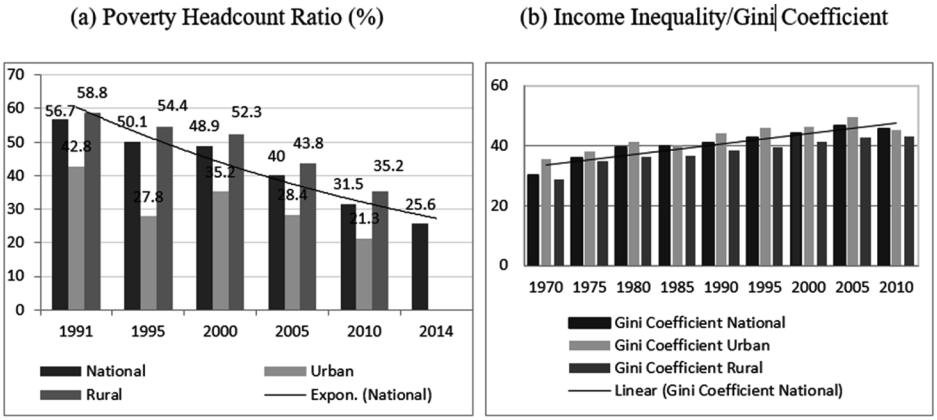


Source: Asian Development Bank (2015) Key Indicators for Asia

The structural composition of an economy changes with the level of economic development as the agriculture sector shrinks and the industrial and service sectors expand qualitatively and quantitatively, becoming more productive and creating more employment opportunities. A lack of transformation in the economy may have arrested the economic growth rate from further acceleration, and it has a far reaching impact on the labour market outcomes, as will be analysed later. Consequently, this may also erode the gains from having a large working age population, as an economy cannot absorb the labour force. Additionally, the structural transformation of the economy has important implications for the demand for skills and human capital formation as well (Sen & Rahman, 2015). If the industrial sector does not grow impeding the absorption of the arge and growing labour force and if favourable changes in population age structure do not coalesce with the transformation and expansion of economic opportunities, the much-desired demographic dividend cannot not be harnessed for faster economic growth.

Apart from this, Bangladesh has also made a notable reduction in its poverty rate from 56.7 percent in 1991 to 25.6 percent in 2014 – a 55 percent reduction over the whole period, as recorded by national poverty estimates (Figure 9). Alternative measures also show that during the last several decades, the rate of poverty has decreased considerably. But in absolute terms, there is still a sizable portion of the population living under the poverty line, with estimates ranging from 48 million to 86 million in 2010 based on different international and regional poverty lines (UNFPA, 2015). Moreover, gains in poverty reduction are not evenly distributed, as there remain pockets of poverty with relations regional, rural-urban, gender, and other dimensions.

Figure 9. *Trends in poverty reduction and income inequality in Bangladesh*



Source: BBS, Household Incomea and Expenditure Surveys 1995, 2005, 2010

While much weight is often given to highlighting and celebrating the achievements in economic growth in Bangladesh, a critical look points out the loopholes in the existing growth pattern of the country. A sizable portion of population still remains under poverty, and inequality is increasing, as observed by different measures of poverty gap and inequality indices (see for example Legatum Prosperity Index, 2016; Osmani, 2015; Unnayan Onneshan, 2014; ADB, 2014). For example, Osmani (2015) provides a critical analysis of inequality in the growth pattern of Bangladesh and observes that "high growth and rising inequality" are two sides of the same coin in the country (p. 19). His analysis of dynamics of falling real wage and rising labour productivity shows that when the rise in real wage is slower than the rise in productivity, relative shares of labour inputs decrease and non-labour factors of production like land or capital increase. This inevitably widens the gap between rich and poor in the economy, since latter group provides most of the labour inputs.

Table 2. *Annual growth in real GDP, real wage, and labour productivity in Bangladesh (%)*

	Real GDP	**Nominal wage**	**Food CPI**	**Real wage**	**GDP per worker**
1981-1989	3.42	12.43	9.52	2.91	0.25
1989-2000	4.90	5.44	5.31	0.13	2.34
2000-2010	6.50	8.94	8.17	0.77	3.18

Source: Osmani (2015)

During the 1980s, labour productivity growth was only 0.25 percent, whereas real wage rose at a rate of almost three percent per year. In contrast, the reversal of the trend in subsequent decades when growth in labour productivity increased but growth in the real wages rate plummeted was possibly due to "the presence of a large pool of surplus labour" (Osmani, 2015, p. 18). It is also important to note that this availability of cheap and surplus labour has provided Bangladesh a competitive advantage in the globalised economy and led to a higher growth trajectory since the 1990s, aided by a growth in garments exports and remittances (Helal & Hossain, 2013; Osamni, 2015). Despite this fact, gains from demographic dividends have been found to be low, which could have augmented the rapid growth in the observed period.

A critical examination of recent data identify three broad features of growth patterns in Bangladesh are preventing the country from maximising its gains in terms of rapid socio-economic progress by capitalising on favourable changes in population age structure. That is, the economic growth pattern in Bangladesh has been characterised to be 'inequalising', 'informalising', and 'not job-intensive'. In line with this argument, the next section provides a selective assessment of the key dimensions of economic development in Bangladesh that are crucial for maximising gains from demographic dividends.

DEMOGRAPHIC TRANSITION AND SOCIAL DEVELOPMENT IN BANGLADESH

Translating the 'window of opportunity' into 'demographic dividend' is highly policy driven and conditional upon an enabling policy environment, institutions, and infrastructures. There are a number of ways to link favourable population changes to desirable economic and social outcomes. As observed in the case of East Asian countries that made significant gains from the rising share of their working age populations, the gains from demographic dividends are not automatic and are entirely conditional on a complimentary policy environment that links dynamic changes in population age structure during initial and intermediate stages of age structural transition by adopting 'formative' and 'productive' policies to ensure adequate investments into human capital formation, expand the productive capacity of the economy to employ the growing labour force, mobilise adequate savings and investments into high productivity and job-intensive sectors of the economy, and transform the social security and welfare regime of the country.

Along with these policies, two more factors are also critical to enable an economy to realise dividends from favourable population changes. First, much of the gains depend on a particular socio-economic context and specific timing as a country passes through different phases of the transition process. The challenges and opportunities that Bangladesh is facing now were not, and will not be the same in decades earlier or later, nor are they like those faced by other countries, as shown in Table 1. Second, the prevailing stage of a country's economic growth and a state's capacity (political and institutional) to engineer development are also critical for undertaking comprehensive interventions and considerable investments in an economy. Informed by these considerations, the article now analyses the state of social development in Bangladesh following the framework of age structural transition and economic development to assess its performance in the key policy areas during the passing of formative and productive phases.

Status of health, education, and human capital formation

Human capital formation through improvements in health, education, and skill development is the highest priority during the 'formative' phase of age structural transition, and it is one of the key channels through with demographic dividend enhances economic development. In fact, human capital has been strongly established to be one of the key drivers of economic growth (Tamura, 2006; Mincer, 1984). In this section, the focus is on issues related to health, education, and skills formation for the target age groups: children (0-14 years) and youth (15-24 years). It is documented that demographic transition is largely conditioned by interventions in the health sector to achieve a reduction in rates of mortality and fertility. Over the course of the transition, priorities in the health sector changes, with child and maternal health earning the most attention. Bangladesh has performed well in a number of key health indicators, such as significant reduction in rates of fertility and child and maternal mortality. Improvement in health conditions is also evidenced by gains in life expectancy at birth, which has increased from 47 years in 1971 to 70.3 years in 2012. This is well above India (66.21 years) and Pakistan (66.44 years) but slightly lower than Sri Lanka (74.07 years) (UN, 2015).

There have been two major challenges where human capital development is concerned. The prevalence of malnutrition in Bangladesh is one of the highest in comparable country groups. The nutritional status of children is very poor, and there remains a high incidence of stunting (low height-for-age), wasting (low weight-for-height), and underweight status (low weight-for-age) among children, as shown in Figure 10.

Figure 10. *Proportion of children with malnutrition in Bangladesh*

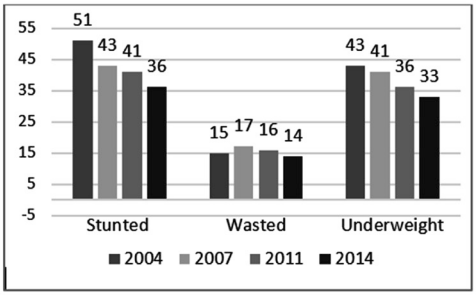
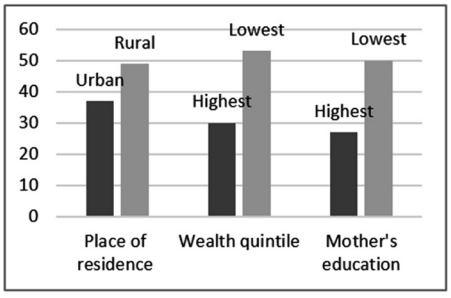


Figure 11. *Inequalities in urder-five mortality rate in Bangladesh, 2014*



Source: NIPPORT (2016) Bangladesh Demographic and Health Survey 2014

The second problem relates to the prevailing high inequality (Figure 11). Despite gains in the health sector, high inequality persists among regional, rural-urban, and poorest-wealthiest income groups in the under-five mortality rate (Figure 11). In terms of major indicators such as the mortality and morbidity rate, the nutritional status of children and women, access to and provision of healthcare services, and a host of other dimensions, there remains high inequality (Osmani, 2015). Persistently high or even an increasing trend in inequality in health outcomes along with a high prevalence of undernutrition are serious deadlocks for healthy human capital development. Improving the nutritional and health status of underage children and addressing health issues particularly for adolescent girls are critical for achieving gains from demographic dividends. It is also important to note that the share of the old age population will increase in the coming decades relative to children and the young population, and the healthcare need of the aging population will be substantially higher. In order to meet these challenges, investments in basic infrastructure development in the health sector and universal coverage of health services warrant highest prioritisation.

The present coverage of public health infrastructure and healthcare resources in Bangladesh is hugely insufficient and is one of the lowest in South Asia and other comparable country groups (Table 3). Public expenditure in the health sector as percentage of the GDP is also one of the lowest in the world (about one percent of the GDP). The per capita government expenditure on health is only 26 US Dollars (BBS 2012a).

Table 3. *Physicians and hospital beds per one thousand people 1990, 2000, and 2013*

	1990	**2000**	**2013**	**1990**	**2000**	**2013**
Bangladesh	0.18	0.23	0.36	0.30	0.30	0.60
India	0.48	0.51	0.70	0.79	0.69	0.70
Nepal	0.05	0.05	0.21	0.24	0.20	5.00
Sri Lanka	0.15	0.43	0.68	2.74	2.90	3.60
Singapore	1.27	1.40	1.95	3.61	2.90	2.00
Malaysia	0.39	0.70	1.20	2.13	1.80	1.90

Source: Asian Development Bank (2015)

Turning to education, which is another major component of human capital, Bangladesh also made gains in achieving universal primary education and attaining gender parity at both the primary and secondary levels during the last couple of years. The net enrolment ratio is more than 97 percent, and the ratio of girls in both primary and secondary education is over 100 percent (DoPE, 2016). Nevertheless, there are several challenges that are inhibiting the formation of educated human capital in the country. The adult literacy rate is still 58.8 percent in 2012 in Bangladesh, which means more than two-thirds of the population cannot write or read. The adult literacy rate in Bangladesh has only increased from 11.3 percent since 2001. In comparison to South Asian countries (Table 4), the adult literacy rate in Bangladesh is quite low. This has negative effects on employability of the labour force in modernising sectors of the economy and diminishes the prospects of growth in productivity and earnings and thus, from securing demographic dividends.

Table 4. *Adult literacy rate (15+) in selected South Asian countries*

Countries	Both Sexes				Female				Male			
	2000		2013		2000		2013		2000		2013	
Bangladesh	47.5	(2001)	58.8	(2012)	40.8	(2001)	55.1	(2012)	53.9	(2001)	62.5	(2012)
India	61.0	(2001)	62.8	(2006)	47.8	(2001)	50.8	(2006)	73.4	(2001)	75.2	(2006)
Nepal	48.6	(2001)	57.4	(2011)	34.9	(2001)	46.7	(2011)	62.7	(2001)	71.1	(2011)
Sri Lanka	90.7	(2001)	91.2	(2010)	89.1	(2001)	90.0	(2010)	92.3	(2001)	92.6	(2010)

*Source: A*sian Development Bank (2015)

Another recurring challenge that grabs particular attention is that of the attainment in secondary education, which has remained persistently low and has seen little average growth during the last decade. As shown in Figure 12, the gross enrolment ratio in Bangladesh is also the lowest among South Asian and other comparable countries. Another notable trend, even so, is the unprecedented growth of female education, with a number of positive chain effects on the economic and social development of the country (see, for example, Duflo, 2012).

Figure 12 (a). *Gross enrolment rate in secondary level, male and female 1999-2012*

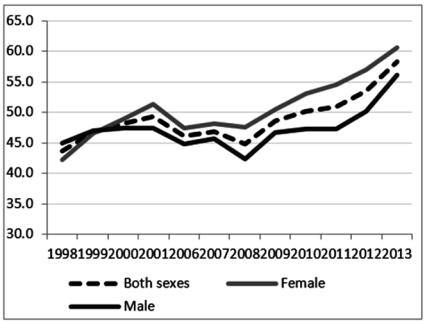
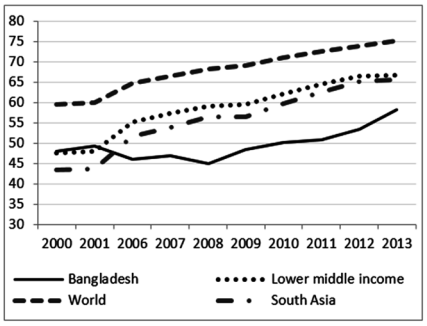


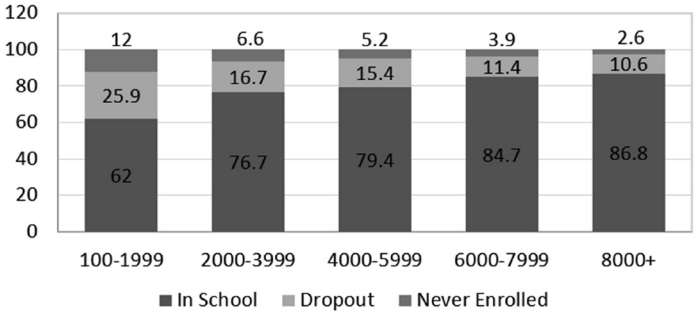
Figure 12 (b). *Gross enrolment rates in selected South Asian countries (both sexes)*



Source: World Bank (2016) World Development Indicators

Following an examination of education sector outcomes in Bangladesh, two major shortcomings can be identified: poor quality in education attainment and prevalent disparity in all levels of educational access and outcomes (Rahman, Khan, & Sabbih, 2016). The latest available data show that access to education and attainment in learning outcomes vary with the level of household income. Only 62 percent of children from households with income levels below 2000 taka are in school; 12 percent were never enrolled and 25.9 percent have dropped out of school (Figure 13). Thus, the educational attainment of lower income households is substantially low in spite of the availability of free and universal primary education and government support programmes.

Figure 13. *Proportion of school-going, dropped-out and never enrolled children by income group*



Source: Hossain and Zeitlyn (2010)

Improving education outcomes requires large investment in infrastructure and capacity building, since more than one-fourth of the population is now of school-going age (0-14 years). The large difference in the student-teacher ratio indicates that the country requires significant investment in education sector development (Table 5).

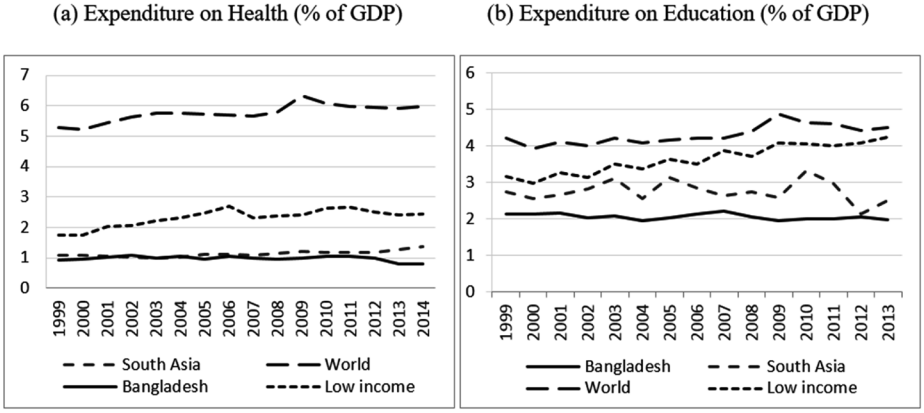
Table 5. *The student-teacher ratio at primary and secondary levels*

	Primary Pupil–Teacher Ratio			**Secondary Pupil–Teacher Ratio**		
	1990	**2000**	**2013**	**1990**	**2000**	**2013**
Bangladesh	63.0	57.1	40.2	27.4	38.4	32.2
India	46.0	40.0	35.2	28.7	33.6	25.9
Nepal	39.2	38.0	25.6	31.1	30.2	29.2
Sri Lanka	29.1	26.3	24.4	19.1	19.6	17.3
Singapore	25.8	25.6	17.4	17.9	19.4	14.9
Malaysia	20.4	19.6	12.5	19.3	18.4	13.6

Notes: Country data was taken from the most recently available years to 1990, 2000, & 2013.
Source: Asian Development Bank (2015)

The amount of public investment in the education sector is very low in Bangladesh, and it has remained at only 2.2 percent of the GDP or even lower throughout the last several decades (Ministry of Finance, 2015). In terms of international comparison, the existing education infrastructure and current level of investment in education is quite low and insufficient for enhancing human capital. On top of that, the inefficient and corruption-ridden administration of the education system has resulted in poor implementation of the existing budget and policies in the country (Rahman, Khan, & Sabbih, 2016). Overall, public expenditure in health and education in Bangladesh is much lower than the world average rate, which is six percent and five percent of the GDP, respectively, and even lower than the average spending in low-income countries, as shown below (Figure 14).

Figure 14. *Public expenditure on health and education as a share of GDP*



Source: World Bank (2016) World Development Indicators

The preceding assessment of the health and education scenario in Bangladesh, despite citing evidence of achievements in many respects, reveals a grim picture of poor nutrition and persistent inequality in health along with low quality and disparity in educational outcomes. In this connection, the analysis of education and skills formation for the working age population provides useful insights. A major portion of the young working age population between the age range of 15 to 24 years continues to remain in education, and their proportion has increased during recent years, as is evident from the declining youth labour force participation rate in Bangladesh.

The education and skills development of the youth age group immediately contribute to economic growth by enhancing the gains in employability, productivity, and income earned by those who are already in or about to transition to the labour market, and thus, they can increase the magnitude of demographic dividends (ADB, 2016). The overall attainment of education is low despite progress in recent years, as one-fifth of the labour force has no educational qualifications (Table 6). Female education at the primary and secondary levels is higher, but it remains low in tertiary levels. A great majority of the rural labour force is uneducated, and their proportion is almost five times higher than that of urban workers.

Table 6. *Education of the labour force aged 15 and over in Bangladesh (%)*

Level of education	Labour force				
	Total	Female	Male	Urban	Rural
None	21.2	21.3	21.2	5.7	27.3
Primary (Classes I-V)	28.2	33.5	25.9	21.6	30.8
Secondary (Classes VI-X)	30.4	29.0	31.1	36.2	28.2
Higher Secondary (Classes XI-XII)	13.4	11.6	14.2	21.0	10.4
Tertiary (All degrees or diplomas)	6.3	4.3	7.2	15.3	2.8
Other/unknown	0.4	0.4	0.5	0.2	0.5
Total	100	100	100	100	100

Source: BBS (2015a)

Segregated data on the highest educational attainment of population age groups of 15 years and above (Table 7) show that only 40.4 percent of 20-24 year-olds completed higher secondary level education in 2011. The proportion of graduates is very low for all ages over 15 and constitutes only nine percent for age groups 20-29 in Bangladesh. More strikingly, about 58 percent of the 50 years and above population has no education, and the rate is 77.5 percent for all those aged above 40 years.

Table 7. *Educational attainment of population aged 15 and over by 5-year age group, 2011*

Highest Class Passed							
Age group	**No schooling**	**Primary**	**Junior secondary**	**Secondary/ higher sec.**	**Graduate**	**Masters or higher**	**Total**
15-19	1.6z	23.1	28.4	46.8	0.2	0.0	100
20-24	2.2	26.6	26.9	40.4	3.7	0.3	100
25-29	3.4	30.2	25.4	33.8	5.3	1.8	100
30-34	5.2	32.2	22.7	31.0	6.2	2.7	100
35-39	7.4	35.5	21.6	27.6	5.6	2.3	100
40-44	9.5	35.9	20.2	26.5	5.7	2.2	100
45-49	10.4	37.3	20.0	25.9	4.6	1.8	100
50-54	13.3	39.0	17.8	24.4	4.3	1.3	100
55-59	13.6	39.3	17.2	24.4	3.9	1.5	100
60-64	15.1	41.1	16.3	22.8	3.7	1.1	100
65+	15.6	41.4	17.4	21.7	3.0	0.8	100
All ages 15+	7.1	32.7	22.7	32.0	4.1	1.4	100

Source: *BBS (2012b)*

Returns on education are modest and do not increase much between uneducated workers and those who have completed primary or secondary education (Table 8). The rise in income premium from completing basic education is only six percent and even lower for secondary education (ADB, 2015). This might explain the reasons for lower enrolment in secondary levels, as the low returns to education do not compensate for the loss in income that may be incurred while attending schools. Overall returns on education are substantially lower in Bangladesh compared to other poor countries as well as to the international standard (ADB, 2016; Asadullah, 2006). This situation implies that an increase in educational attainment has not been matched with the availability of remunerative job opportunities in the economy.

Table 8. *Returns on education and employment income, 2013*

Level of education	**Monthly Employment Income (in Tk.)**		
	Rural	**Urban**	**Total**
None/Never Attended School	8,884	8,996	8,985
Primary (Classes I-V)	11,243	10,202	10,550
Secondary (Classes VI-X)	11,620	10,792	11,122
Higher Secondary (Classes XI-XII)	14,195	12,770	13,469
Tertiary (All degrees or diplomas)	21,715	14,413	19,566

Source: BBS (2015a)

Finally, it is expected that with the transformation and diversification of an economy, the variety and requirement of skills tend to increase. In the case of Bangladesh, however, data on the skill levels of the workforce are not directly available, since the country's Labour Force Surveys collect data only based on education qualifications and do not have classifications based on skill levels. Alternatively, data from the Bureau for Manpower Export and Training (BMET) on migrant workers give some indications that skill formation is not up to the expected level. For example, among a total of 568,062 manpower exported in 2011, professional workers constituted only 0.2 percent and skilled workers only 40 percent, whereas the share of semi-skilled and less skilled workers was five percent and 55 percent, respectively (BMET, 2012).

Taking into account this prevailing pattern of low skill formation in the country, it is clear that there might be a widespread skills -gap and mismatch of skills in many sectors of the economy. For instance, estimates suggest that around 62 percent of young workers are undereducated with regard to the requirements of their jobs in mainly skilled agriculture, trades, and other related fields (Toufique, 2014). According to the Bangladesh National Skill Survey (2012), the first of its kind, the estimated gap between the demand and supply of skilled labour in selected manufacturing and trade sectors is approximately 1.458 million each year, which is a considerable figure. Put together, the educational attainment of the existing labour force is still low, with fewer gains in income from additional schooling. Less skilled and semi-skilled workers constitute the majority of the labour force, and there remains a widespread skills gap. The existing allocation, infrastructure, and capacities of technical and vocational training is also limited (Sen & Rahman, 2015). All these have clear consequences on the formation of human capital, which eventually builds the foundation for rapid economic development during the age structural transition through realising the potentials of an increasing labour supply.

DEMOGRAPHIC DIVIDEND, EMPLOYMENT, AND PRODUCTIVE EXPANSION OF THE ECONOMY

An increased labour supply from a growing working age population is the direct channel through which demographic dividend can be harnessed for faster economic development. Having a large and growing proportion of population in their prime working ages does not guarantee any dividend unless or until they are fully employed in high productivity sectors during the structural transformation. This only happens when fast economic growth coalesces with high employment growth along with growth in productivity and real wage. In fact, the interaction between economic growth and employment is a dynamic two-way process where 'job-rich' economic growth absorbs the growing labour force into productive employment and creates a virtuous cycle of faster economic development in effect (Unnayan Onneshan, 2014). This nexus derives further impetus in the presence of the 'window of opportunity' offered by the first demographic dividend, which marks the rapid and sustaining growth of the labour force due to changes in population age structures throughout the intermediate stage of the demographic transition. Nevertheless, as emphasised earlier, the growing

labour force must be absorbed into the productive sectors of the economy.

Observing the case of Bangladesh, however, it seems that the country has not been able to properly utilise its growing labour force, as can be shown by the very low rate of labour absorption in the economy. The UNFPA (2015) has estimated the labour absorption rate based on three different methods taking into account varying criteria for employment, unemployment, and underemployment and found that the overall rate of labour absorption in Bangladesh is 47.2 percent, with 34.3 percent for females and 61.3 percent for males (p. 62). This implies that over the past decade (2000-2010), the country's economy has not been able to absorb more than 50 percent of its labour force into fulltime productive employment. Widespread underemployment and high unemployment in the economy reflect this prevailing situation.

The relative size of the labour supply available for productive activities is measured by the labour force participation rate, which was 57.1 percent in Bangladesh in 2013. The male labour force participation is 81.7, and for females it is 33.5 percent. While the participation rate for male labour decreased by 6.52 percent between 2003 and 2013, the rate of female labour force participation was increasing during the 2000-2010 period, and the rate previously increased from 23.9 percent to 36 percent but falling to 33.5 percent in 2013. Youth labour force participation is also slightly decreasing, implying that young people are pursuing education for a longer duration. Notably, female labour force participation is still low in Bangladesh compared to other countries. Increasing female participation is important counterbalancing the decline in the growth rate of the labour force, as the size of working age population will start shrinking within the coming decades.

During the productivity or first dividend phase, the labour force growth rate remains higher than the population growth rate. An analysis of the state of employment in Bangladesh shows that the labour force has grown by around one and half million annually, with an average growth rate of 3.04 percent per annum during the last decade between 2003 and 2013 (Table 9). Bangladesh's economy has created 13.8 million jobs during this same period, and the employment to population ratio rose to 37.7 percent

in 2013. Nevertheless, this has not been adequate for capturing the extra dividend offered by the large and growing labour force.

Table 9. *Population in the labour force and the employment situation in Bangladesh*

Year	Total Population (in millions)	Labour Force (in millions)	Employed Population (in millions)	Unemployed Population (in millions)	Inactive Population (in millions)	Employment to Population Ratio (%)	Unemployment Rate (%)
2000	129.8	40.7	39.0	1.7	33.5	30.05	4.3
2003	133.4	46.3	44.3	2.0	34.5	33.21	4.3
2006	138.8	49.5	47.4	2.1	35.1	34.15	4.3
2010	147.9	56.7	54.1	2.6	38.9	36.58	4.5
2013	154.1	60.7	58.1	2.6	45.6	37.70	4.3

Source: BBS (2015a)

Although the share of the working age population is around 65 percent, the proportion of the inactive population is still 29 percent of the population. Since the economically inactive population is dependent on family income, it means a much higher dependency burden than what is implied by the theoretical dependency ratio (Tawfique, 2014). The inactive population in the youth age group is very high at 62.3 percent, but it includes full time students as well. Alternatively, the proportion of youth neither in education nor in employment or training (NEET) is 41 percent in Bangladesh, and this gives a more accurate picture of the nature of economic activity (ILO, 2013). The large proportion of the inactive non-student population reinforces the claim that the underutilisation of labour is prevalent in Bangladesh.

The overall unemployment rate was 4.3 percent in 2013, but the data do not reveal the real situation of the labour market in the country. The absence of unemployment benefits, intrinsic compulsion from poverty, lack of income earning opportunities, and prevalence of underemployment mask the extent of unemployment in the economy (Unnayan Onneshan, 2014). Among the youth population (aged 15-29 years) who comprised 38 percent of labour force in the country, the unemployment rate has been reported to be the highest at 8.1 percent. Unemployment is also higher among

educated youth with secondary or post-secondary education. Furthermore, there is widespread underemployment in the economy. Singlehandedly, the agriculture sector accounts for 72 percent of underemployed labour, while in case of industry the proportion is only seven percent. The proportion of underemployment is highest among the 15-29 age group (five percent), whereas this rate is 3.5 percent for the 30-64 age group (BBS, 2015a).

Most notably, the employment situation in Bangladesh is characterised to be overwhelmingly informalising in nature. A large majority of the workers (87 percent of the 58.1 million strong labour force) are employed in the informal sector, which accounts for nine out of ten newly created jobs in the economy. According to the latest available data, the incidence of informality is highest in the agriculture sector, in rural areas, and among the female and less educated labour force, and it is slightly higher among the youth population (15-29 years) (BBS, 2015b). Recent trends show that the proportion of informal employment to total employment rose by 14.6 percent between 2003 and 2013, with an annual increase of 1.46 percent (BBS, 2015). Apart from this, the low skill and wage rate, poor quality of employment, high degree of vulnerable employment, and lack of safety and protection at work further characterise the labour market in Bangladesh (ILO, 2013; Unnayan Onneshan, 2014). Growing informalisation of the economy affects the quality of employment and skill formation and indicates a depressed employment situation in the country (Titumir & Hossain, 2003).

Turning to demographic dividend, it must be stressed that whether changes in population age structure are increasing the pace of economic growth depends on how much the prevailing pattern of growth is creating adequate opportunities for the young and dynamic labour force by expanding productive capacity in mainly job-intensive manufacturing and modern sectors of an economy. As indicated earlier in this paper, during the last one and half decade, Bangladesh's economy has experienced little transformation away from agriculture to industry. Despite having moderate to high economic growth during the last two decades, the economy has not experienced any major structural transformation, with a similar trajectory of growth being documented in other South Asian countries (Khan, 2005).

Economic growth in Bangladesh has not been complemented by accompanying growth in productive employment in the industrial sector, with the exception of the manufacturing of readymade garments. This is unlike the spectacular growth and economic transformation experienced by the East Asian countries, which enabled them to capitalise on the demographic dividend. For example, in South Korea, between 1980 and 1990 the share of employment in agriculture halved from 34 percent to 17 percent with a 40 percent decline in absolute share of employment in agriculture (Khan, 2005). In Bangladesh, nonetheless, the share of agricultural output has decreased from 21.8 percent of the GDP in 2003 to 16.3 percent in 2013 – a 25 percent decline over a decade. However, during the same period the share of employment in agriculture has decreased only by 12.7 percent, and the agriculture sector still accounts for half of total employment (45.1 percent) in the country (Table 10).

Table 10. *Distribution of output (% of GDP) and distribution of employment (% of total employment) by broad economic sectors*

	2000	**2003**	**2005**	**2010**	**2013**
Share of agriculture in GDP	25.5	21.8	20.1	17.8	16.3
Share of employment in agriculture	62.1	51.7	48.1	47.5	45.1
Share of industry in GDP	25.3	26.3	27.2	26.1	27.6
Share of employment in industry	10.3	13.7	14.5	17.7	20.8
Share of service in GDP	49.2	52.0	52.6	56.0	56.1
Share of employment in service	23.5	34.6	37.4	35.3	34.1

Source: BBS (2015) and World Bank Data

Over the same decade, the share of industry in the GDP has changed little, amounting to a 4.9 percent increase during the 2003-2013 decade The share of service saw only a slight increase as well. Nonetheless, the percentage of the labour force employed in industry doubled between 2003 and 2013 but still accounts for only one fourth of total employment. The share of employment in the service sector has in fact seen a decline from its 2005 level, which was growing in the previous decade. A further breakdown of employment growth in manufacturing sub-sectors shows that employment growth in the readymade garments sector accounted for much of the increase in employment (Raihan, 2016). In the East Asian

case, the employment elasticity of output growth was between 0.7 and 0.8 when real wage increased with a rise in per capita income, but in the case of Bangladesh, as some estimates showed, this rate may have fallen between 0.3 and 0.4 where employment elasticity with respect to GDP growth is quite low and even declining (Bayes, 2010; Khan, 2005). Other estimates show that the overall employment elasticity is low in South Asian countries, and this region experienced little structural transformation compared to East and South East Asia (Kapsos, 2005).

Taken as a whole, Bangladesh experienced little growth in real wage with low returns on labour and rising inequality in labour income as discussed earlier in this paper. The growth in labour productivity has also seen a slow rise in recent years, with around half of the labour force employed in the low productivity agriculture sector, as shown in Figure 15(a). A comparative trend analysis of labour productivity in Bangladesh, India, and China shows that Bangladesh's gain in labour productivity growth is substantially lower than those of China and India, both of which have experienced rapid growth in productivity since year 2000.

The state of savings, investment, and capital formation

Expanding the productive capacity of an economy requires that an increasing amount of resources will be mobilised and invested in infrastructure, human capital development, and productive employment creation. First and foremost, the rate of economic growth and productive capacity of an economy cannot be expanded without mobilising increased domestic savings and investment in a country. In the case of Bangladesh, the domestic savings rate was 22.3 percent and the national savings was 29.01 percent of the GDP in the 2014-15 period, as shown in Figure 15(a). Although showing a moderate increasing trend over the last two decades, the level of savings has been low in comparison to other developing countries (Agarwal & Sahoo, 2009). Similarly, the investment scenario has experienced growth mainly due to growth in private investments. Total investment was 28.97 percent of the GDP in the 2014-15 period, and private investment constituted 22.07 percent. The rate of growth of public investment has not accelerated in recent years, and overall investment rates have fluctuated due to frequent political instability in the country.

Figure 15 (a). *GDP per worker by economic sector (in BDT)*

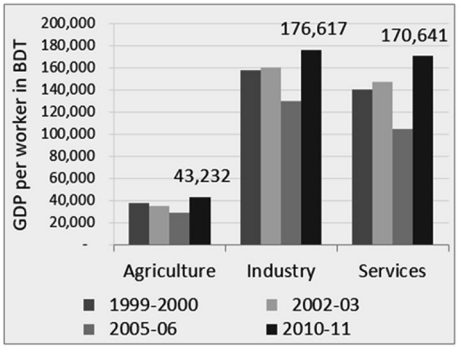
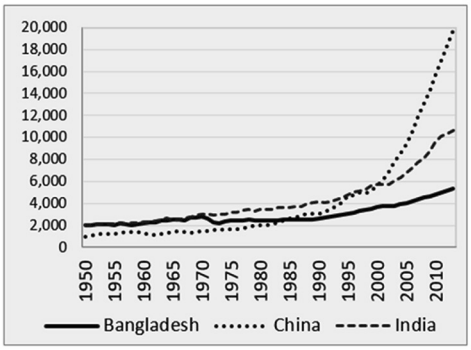


Figure 15 (b). *Labour productivity in Bangladesh, India and China*



Source: Authors' calculation based on Labour force survey and economic review various years and The Conference Board (2014) Total Economy Database

Another way of leveraging domestic resources is to increase government revenue. Generating domestic finance through broadening the tax base and raising tax revenue provides a country much manoeuvrability to embark on investments in productive sectors to accelerate creation of employment opportunities for a larger working age population. Currently tax revenue collection in Bangladesh is quite low, as it was 9.29 percent of the GDP in the 2014-15 period. Although the volume of total revenue saw a slight increase in recent years, the growth of tax revenue collection has been very slow over the years (Table 11).

Table 11. *Revenue receipts in Bangladesh (as % of GDP)*

	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Total revenue	9.00	9.63	9.81	9.97	10.39	10.89	11.65	11.66	10.79
Tax revenue	7.14	7.64	7.88	8.02	8.63	9.12	9.74	9.69	9.29
Non-tax revenue	1.86	1.99	1.94	1.95	1.76	1.76	1.91	1.97	1.50

Source: Bangladesh Economic Review 2015.

Bangladesh's revenue collection is the lowest even in comparison to other South Asian and lower middle income countries, whereas in South Asia, low tax collection and persistent expenditure deficit have badly affected the performance of these economies (Padda & Akram, 2010). Generally, the tax revenue to GDP ratio in most developing countries like Bangladesh

is two to four times lower than that of developed countries. Mobilising tax revenue by at least 25 percent of the GDP is decisive for strengthening the government's capacity to engineer development by undertaking comprehensive interventions and considerable investments in the economy. Coupled with domestic resource mobilisation, attracting more foreign direct investment (FDI) can boost economic growth and add dynamism to the domestic economy. This has been a powerful driver of growth in East Asian countries as well. In 2015, the total volume of FDI in South Asia was 50.48 billion USD, of which India alone secured 44.21 billion USD, or 87.56 percent, while Bangladesh only received 4.43 percent (UNCTAD, 2016). Finally, taking into account the volume of illicit financial outflow from the country, which was 1.3 billion US Dollars in 2013, it becomes clear that the country is failing to keep its surplus capital invested in the economy (Kar & Spanjers, 2015). This amount of illicit capital flight from Bangladesh has damaging consequences, and it is certainly depriving the domestic economy, as a large portion of its investible surplus is leaving its borders.

By and large, a brief overview of the economy of Bangladesh as presented above reveals that, despite recent gains, the rate of savings, investment, and capital formation as well as the government's capacity to mobilise domestic resources have been inadequate for creating a springboard for faster economic development in the country, even in the presence of advantageous demographic conditions. In order to become a middle income country by 2021, Bangladesh needs to raise its GDP growth to 7.5-8 percent per year while accelerating job creation in productive sectors of the economy as well as increasing investment by at least five percentage points from the current level of 28.97 percent (World Bank, 2015). Creating conducive institutional arrangements and encouraging an environment for private savings should assume priority in order to harvest the prosperity promised by demographic dividends. Priority must be given to creating incentives and a conducive institutional environment for domestic savings, capital formation, and foreign investments as well as to improving governance capacity to raise revenue and reduce illicit capital flight from the country.

CONCLUSION

In this article, an attempt has been made to propose a comprehensive framework that stipulates the relations amongst changes in population age structure, demographic transition, and economic development in the context of developing countries through an examination of the case of Bangladesh. The dynamics of changes in population age structure have powerful policy implications for economic growth and social development. An increase in the proportion of the working age population could augment faster economic growth provided that institutions are enabled and appropriate policy measures and response strategies are devised during the demographic transition as outlined in the proposed framework. Currently being in the intermediate stage of demographic transition, Bangladesh is passing through the transient 'dividend' period like many other developing countries, but the country is found to have performed much lower than the expected level and has not been able to fully realise its potential gains from advantageous changes in its population age structure.

This article critically assessed the current state of Bangladesh in the transition process and identified major gaps in its institutions, infrastructure, policy interventions, and overall response measures, preventing it from seizing opportunities offered by dynamic changes in its population age structure. Despite some achievements in economic growth and social development, the current pattern of growth in the economy has not been able to fully capitalise on the changes in the population age structure. The prevailing problem with the pattern of economic growth is that it is not inclusive, and prosperity is not evenly shared with all segments of the country's population. Gains in nutritional status, quality education, and skills development are poor and plagued by persistently rising inequality. There remains low performance in expanding the productive capacity of the economy, resulting in high unemployment and underutilisation of labour with negative consequences on the economic and social outcomes, such as inequality in labour income and the overwhelming informality of employment. In addition, the growing proportion of an older population will pose challenges to accommodating the rise in the dependent population within the next few decades. This needs to be explored further, as it is not covered in this article.

It is argued that if an economy remains stagnant in the absence of major

structural transformation, gains from favourable changes in the population age structure and resultant demographic dividends cannot be realised. This article has shown that the economy of the country has not been transforming structurally in recent years and has been failing to absorb the growing labour force productively. More than half of the country's working age population has not been absorbed into the economy with full time employment, and there remains high unemployment, poverty and inequality as well as poor attainment in human development indicators. Considering the prevailing scenario of the economic growth, the absorption of labour force and employment, trends in sectoral transformation, and the state of poverty, inequality, and human development, it seems that the inevitable and powerful forces of population change will pose serious challenges for economic development and might even erode the sustainability of the country's future growth prospects. As the country's population age structure is undergoing dynamic transition, and with an addition of at least 50 million people in the next three decades, the country's economy requires a fundamental transformation away from agriculture to industrialisation. Bangladesh needs to focus increasing attention on effectively reaping opportunities and addressing challenges at the crossroads of population-development dynamics. As per the proposed framework, the later stage of prosperity will largely depend on how well Bangladesh can address the existing challenges during the remaining years of its intermediate stage.

This article emphasises the view that deriving economic gains from the growing size of the labour force and changing age structure is a direct function of state policy interventions, which needs to be well informed by an adequate understanding of the dynamic changes and well-coordinated with major related policy fields, such as the following: industrial policies, to instigate transformation away from agriculture to the labour intensive manufacturing sector; labour market policies, to address problems of the underutilisation, unemployment, and underemployment of labour; and socio-economic policies aiming primarily at building a skilled labour force, accelerating employment creation, and expanding the per capita productive capacity of the economy. Although this article has analysed the overall trend and pattern of economic development in the country within the framework of age-structural transition, one of the limitations that should be noted is that it could not rigorously examine the salience of the propositions in the context of Bangladesh,

which requires additional research. It highlights several areas where further investigations are needed, especially regarding the state of capital formation in relation to changes in age structure and the effects of population aging in Bangladesh during the final stage of the demographic transition.

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Adjustment in the Eurozone Periphery: The Case of Greece

Lalita Som[1]

Abstract

Since 2009, Greece has been at the epicentre of the Eurozone crisis. However, in 2008 and 2011, several Eurozone members (like Portugal, Ireland, Greece, and Spain) and Iceland were equally unable to repay or refinance their government debt. All of these countries were forced to secure financial assistance from third parties such as other Eurozone countries, the European Commission, the European Central Bank (ECB), the Nordic fund (in the case of Iceland), or the International Monetary Fund (IMF). From 2013 onwards, all of these countries except Greece regained complete lending access to financial markets and ended their bailout programmes as scheduled without any need for additional financial support. The EU-IMF economic adjustment programme aimed to reduce the public deficit and debt, primarily through severe cuts in public expenditure and structural reforms. Although Greece returned to modest growth in 2016 through the ongoing reforms and official financing from third parties, the extensive fiscal consolidation and internal devaluation have come at a high cost to Greek society, as reflected in declining incomes and exceptionally high unemployment. This paper examines why the economic adjustment policy has been inadequate for addressing Greece's financial and structural weaknesses. It analyses the main aspects of the adjustment programmes in countries like Iceland, Ireland, and Portugal; assesses their economic impact on these countries; and compares these outcomes to those in Greece.

Keywords: *Economic Adjustment, Devaluation, Eurozone, EU-IMF Financial Assistance.*

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INTRODUCTION

Background: The financial crisis of 2008 and its impact on the EU and Eurozone

There have been several different economic and financial stress periods in both advanced and emerging market economies over the last century. These include: political crises, policy failure crises typified by things like currency crises, banking crises, sovereign (external) debt crises, twin crises (i.e. banking and currency), triple crises (i.e. all three), twin deficits (fiscal and current account), stock market, bond market or property crashes, and the failure of large financial institutions that are systemically important.

However, the financial crisis that began in 2007 and blew up fully in 2008 is without precedent in post-war economic history (Eichengreen & O'Rourke, 2009). It was preceded by a long period of rapid credit growth, low risk premia, abundant liquidity, and the development of real estate (and accompanying credit) bubbles. The crisis was exacerbated by a marked decline in financial intermediation and a synchronised contraction in economic output (Reinhart & Reinhart, 2010).

While the crisis was triggered by sub-prime mortgages and the packaging of sliced and diced debt that was securitised (and sold in global markets) in the US, Europe has not escaped the effects of the global financial crisis, where it has had asymmetric effects. In fact, Europe – and particularly the Eurozone economies in Southern Europe – is suffering from a protracted duration of that crisis, compounded by its own many policy mistakes. These have resulted in very low growth, high unemployment (and unusually high youth unemployment, which is socially destabilising), low productivity, deflation, and an anaemic recovery that shows little signs of achieving the kind of robustness and stability already achieved in the US (and to a lesser extent the UK, where recovery has now been put at risk by Brexit) after eight long years.

The lack of sufficient structural adjustment in Europe

This poses a long-lasting challenge for successful intra-European Union structural adjustment. The European Central Bank (ECB) estimated write-downs of $649 billion on securities and loans by Euro area banks alone over the period of 2007 to10 (ECB, 2009). EU GDP fell by an estimated

four percent in 2009, the bloc's first recession since the early 1990s and its worst performance on record (European Commission, 2009).

Economic woes have been especially severe in the Eurozone, where countries have battled not only an economic recession but also asset price deflation (despite very high levels of quantitative easing along with extremely low interest rates). Burgeoning internal and external public (and private) debt in almost all EU economies have resulted in too high a level of public/sovereign indebtedness, leaving very little room for fiscal manoeuvre or permitting fiscal policy to play a more commensurate role in sharing the burden of adjustment with monetary policy, which now seems almost played out.

Moreover, the level of public indebtedness, concentrated more in Europe's banking system than in its capital markets (compared to the US and UK), has resulted in EU governments and its larger banks becoming hostage to one another in an unfortunate embrace – reminiscent of the spectre of mutual assured destruction – should things go wrong. In the aftermath of global financial turmoil, various EU governments have had to expend scarce public resources to rescue failing banks, in addition to protecting depositors and utilising monetary and fiscal tools to support banks, to unfreeze credit markets, and to stimulate economic growth.

Different EU countries were affected differently because of their initial conditions and their associated vulnerabilities. Countries that entered the crisis with a housing bubble and a large net foreign liability position faced the need to shift activity from construction to export-oriented activities. They had to reduce their dependency on external financing. Conversely, countries that had large current account surpluses, but were exposed to toxic financial assets, needed to reduce their export dependency and work on the balance sheet problems of their banking systems.

Among the proximate causes of the housing bubble in many deficit countries was the availability of cheap credit during the early 2000s. Some experts attribute a significant role played by emerging markets in East Asia and oil-producing nations as 'surplus savers' – i.e. suppliers of capital as contributors to the global savings glut. Others emphasise that East Asian

emerging economies with surpluses were largely confined to treasury securities and agency debt and that the role of global banks was much more substantial, especially global European banks, in the origination and propagation of the gross capital flows and credit boom conditions in most advanced economies during this period (Gourinchas & Obstfeld, 2012; Shin, 2012).

Private-label securities and other holdings of US assets were concentrated in highly leveraged financial institutions in advanced economies such as Germany, France, Switzerland, and the UK – in short, in the larger global European banks. Almost half of all foreign holdings of US securities (especially asset backed securities packaged as collateralised debt obligations or CDOs) immediately before the crisis were held in Europe (Borio & Disyatat, 2011). Cross-border lending also witnessed a simultaneous increase in wholesale funding raised by global banks, primarily from US money markets. In conjunction with the liability side, the asset side of these global European banks also focused on synthetic US securities of dubious quality.

With minimal exchange rate risk and an appreciating Euro, banks increased lending both within and outside Europe. Ireland, Spain, and the UK, with high asset price appreciation, were the major beneficiaries of such financial inflows. The peripheral countries of the Eurozone (namely, Greece, Ireland, Italy, Portugal, and Spain) witnessed significant increases in capital inflows not just from banks in the core of the Eurozone (namely, France and Germany) but also from UK and Swiss banks. Risk aversion and risk recognition was distorted by the credit boom.

The inevitable bust after the boom saw the very same countries (such as the US, the UK, Spain, and Ireland) afflicted with increasing loan defaults and sharp declines in asset prices. But the effect of this contagion was muted in Greece and Portugal.

The Greek tragedy

In the case of Greece, this partly reflected the good health of the Greek banking sector before the onset of the sovereign debt crisis, as well as its low exposure to toxic assets (OECD, 2011). The decline in asset

prices set in motion a cycle of declining prices, non-performing assets, and deleveraging by banks with significant impact on the real economy in Europe. The rise in uncertainty and the decline in confidence since the downturn have dragged down growth significantly.

Between 2008 and 2011, several Eurozone members (Portugal, Ireland, Greece, and Spain) and Iceland (collectively but inelegantly abbreviated as the PIIGs) were unable to repay or refinance their government debt. Neither could they bail out over-indebted banks under their national supervision, nor could they secure financial assistance from third parties like other Eurozone countries, the ECB, or the IMF. From 2013 onwards, all of these countries except Greece regained complete lending access to financial markets and ended their bailout programmes as scheduled without any need for additional financial support.

Greece not only needed additional support two years later but is also now negotiating yet another round of financial assistance. The adjustment programme in Greece has failed to yield the expected results in restoring activity, public finances, and competitiveness, which has been hit much harder than other in Eurozone countries with adjustment programmes. Growth has plummeted by an average -6.4 percent since 2010. This has worsened its debt problem. Despite the debt restructuring that took place in 2012, Greece's sovereign debt has risen from 146 percent of the GDP in 2010 to 177 percent in 2015. Unemployment has risen sharply from 12.7 percent in 2010 to 26.4 percent in 2014 and has raised social tensions (see Table 1).

Compared to other countries that secured an internationally coordinated adjustment programme around the same time, the outcomes for Greece have been very different. Ironically, Greece had initially held up better during the global financial crisis than the other peripheral countries of the Eurozone, as the impact of the crisis was indirect. But there were signs of an impending recession as tourism and shipping receipts fell substantially. The real estate sector contracted. The financial sector faced pressure from its exposure to the emerging economies of Southeastern Europe.

Although Greece responded with fiscal measures and a plan to assist the

financial sector, its room for policy manoeuvre was restricted by the high public debt, repeated fiscal slippages, and the large external and internal imbalances.

In 2013, Greece was thought to have made significant progress in cutting its fiscal deficit, reducing its current account deficit, and implementing structural reforms to raise labour market flexibility and improve labour competitiveness. But more was expected and needed from Greece in fully implementing and extending structural reforms in the areas of public administration and price competitiveness to achieve fiscal sustainability.

This article compares the causes of each country's crisis among the PIIGS, the conditions of the assistance programme, and the outcomes of those adjustment programmes to understand why Greece has not been able to succeed in achieving the desired results. Clearly, Greece was unable to adjust as well as Iceland, Ireland, and Portugal in an overall sense as well as measured carefully against each critical parameter/dimension of adjustment. This comparative study sheds light on the individual parameters of adjustment, which have helped the other three countries in adjusting, while in the case of Greece, the same conditions harmed aggregate demand, living standards, and exports.

Table 1. *Dimensions of adjustment programmes*

	Greece		Ireland		Portugal		Iceland	
	2010	**2015**	**2010**	**2015**	**2011**	**2015**	**2009**	**2015**
External account sustainability								
1. Net external debt (% GDP)	100.8	139.0	-278.4	-289.0	84.5	101.5	241.8	14.5*
2. Current account (% GDP)	-11.4	-0.1	-1.2	10.2	-6.0	0.5	-10	4.2
3. Capital account (% GDP)	0.9	1.1	0.1	-0.5	1.5	1.3	-30	3.2
4. Management of exchange rate (%)	-	-	-	-	-	-	-26	-32**
Internal macro balance								
1. Fiscal balance (% GDP)	-11.2	-7.2	-32.3	-2.3	-7.4	-4.4	-9.7	-0.5
2. Long-term interest rates	9.09	8.21	6.09	1.11	10.24	2.41	8.26	2.56
3. Short-term interest rates	0.8	0.1	0.8	0.1	1.4	0.1	11.3	6.6
4. Government debt (% GDP)	146.2	176.9	86.8	93.8	111.4	129	82.9	68.5
Financial stability								
Banking System								
1. Domestic credit (% GDP)	111.6	113	134.3	64.8	156.2	120.1	76.6	92.1
2. Loan to deposit rate								
3. Liquid assets/short term liabilities		29.7						
4. Bank capital to assets ratio	6.6	6.8	5.3	13.9	5.3	8.06	14.9	19.4
5. NPLs/Capital provisions	42	80.8	80.8	42.8	36.6	32.9		
6. NPLs/Total gross loans	9.11	34.7	13.0	14.9	7.5	12.8	14.1	2.0
Factor market adjustment								
1. Real labour productivity (index 2010=100)	100	95.4 (p)	100	129.5	100	101.5 (e)		
2. Labour transition (to the same or higher qualification level, % of popn.)	82	85.3 (2014)	84	-	80.4	83.4	74.6	76.1
3. Gross fixed capital formation (GCFC, % GDP)	17.6	11.7(p)	17.6	21.2	18.4	15	13.9	19.2
4. Gross return on capital employed of non-financial corporations (%)	28.15	22.7 (2014)	23.89	22.7 (2014)	12.83	15.07	9.76	12.68 (2013)
5. Ratio of GCFC & Gross Value Added (investment rate %)	21.35	15.12 (2014)	19.07	23.91 (2014)	22.67	20.13	16.24	19.64
6. Venture capital investment (% GDP)	0.002	0.000	0.017	0.041	0.007	0.039		

Sources: Eurostat (2016), OECD (2016), IMF (2016), World Bank (2016), BIS (2016)

http://ec.europa.eu/eurostat/data/database accessed 10/9/2016
https://data.oecd.org accessed 12/9/2016
http://www.imf.org/en/data accessed 1/10/2016
http://data.worldbank.org accessed 13/9/2016
http://www.bis.org/statistics/index.htm?m=6%7C37 accessed 20/9/2016

* The end-2015 external debt ratio is more noteworthy because in the first quarter of 2015 the net debt position was 385 percent of the GDP (Moody's Investor Services, 2016). That figure included, at full price, all the debt of the failed banks' estates, even though it had long since become clear that those debts would be significantly restructured. Nearly 40 percent of the reduction is due to the current account surplus and GDP growth during this period, and the rest is due to default, debt restructuring, and other factors (Guðmundsson, 2016).

** Yearly change in the exchange rate between ISK and EUR.
(p) projected, (e) estimated

Table 1 above shows how the four countries adjusted their factor markets to face their respective crises. The basic tenet of structural adjustment is the mobility of labour and capital to their most productive uses, their reallocation to more efficient uses, and increasing their productivity. The process of transferring resources to more productive uses and to new and expanding areas is critical to successful adjustment and an important driver of sustained growth. The policy challenge is therefore to facilitate reallocation to take advantage of new possibilities.

By this standard, successful countries would not necessarily be characterised by stable sectoral patterns of production and employment or by the presence of particular industries. Instead, they would be characterised by their capacity to manage structural change without experiencing long-lasting increases in unemployment among working-age persons (OECD, 2005).
Table 1 clearly shows that the outcomes related to international trade, investment, the functioning of labour markets, and the reallocation of capital have deteriorated significantly for Greece between 2010 and 2015. Although Greece rose to the policy challenge related in particular to reforms in structural policies affecting the functioning of labour and

product markets, the outcomes have been very high (and unsustainable) adjustment costs for individuals–and society as a whole–but with successful adjustment still proving elusive.

THE ROOT CAUSES OF INDIVIDUAL COUNTRY CRISES

Starting with Greece in 2009, countries in the periphery of the Eurozone drifted into a sovereign debt crisis as concerns about deterioration of credit quality made it increasingly difficult for the affected countries to refinance and service existing debt. The crisis quickly spilled over to Ireland, Italy, Portugal, and Spain. Deterioration in sovereign credit-worthiness fed back into the financial sector (Acharya, Drechsler, & Schnabl, 2014).

Consequently, lending to the private sector contracted substantially in these countries. This drop in credit supply led to a sharp increase in uncertainty for borrowing firms as to whether they would be able to access bank funding in the future. However, individually these countries coasted into the crisis because of country-specific reasons leading to several years of rapid expansion, which entailed major internal and external imbalances.

Iceland

Iceland, which is not a member of the EU, faced similar challenges to those of some countries at the periphery of the Eurozone. Against the backdrop of the global financial turmoil, Iceland was struck by a banking crisis of unprecedented proportions. The economy plunged into a deep recession.

Iceland's three main banks, which accounted for 85 percent of the banking sector, were put into receivership in October 2008. These banks had pursued risky strategies, notably borrowing large sums in foreign capital markets to finance the international expansion of Icelandic investment companies. The consolidated assets (i.e. including the assets of Icelandic banks' foreign subsidiaries) of the three banks grew from 170 percent of the GDP at the end of 2003 to 880 percent of the GDP by the end of 2007 (OECD, 2009a).

The three banks had unusually large exposure to highly leveraged firms and to individuals whose main activity was investing in shares or other venture capital or speculative activities (Jännäri, 2009). Domestic credit to

the nonfinancial private sector grew at an annual average rate of 30 percent between 2003 and 2007. High rates of domestic credit growth led to high asset inflation. The Icelandic equity market rose by 390 percent during that period. Real house prices also rose by 89 percent between 2000 and 2007. Non-financial firms and households took on extra debt during the boom years based on inflated asset values. In some cases, the debt was foreign-currency denominated without matching foreign-currency assets or revenues.

Household debt rose from 169 percent of household disposable income before interest payments in 2003 to 201 percent in 2007 (OECD, 2008). The surge in economic growth was led by an investment boom. Investment in large-scale projects related to aluminium smelting and electricity generation grew at an annual average rate of 19 percent between 2003 and 2007. Inflation was much more volatile in Iceland over these four years than in the Euro area. The current account deficit soared from five percent of the GDP in 2003 to 25 percent of the GDP in 2006, reflecting a growing deficit on goods and services. The Central Bank of Iceland (CBI) steadily increased its policy rate, making Iceland an alluring destination for foreign exchange carry trade, much like the Southeast Asian countries in the late 1990s. High interest rates had driven up the value of the Icelandic Króna. Iceland's real effective exchange rate was overvalued by 15 to25 percent in the first half of 2007 (IMF, 2008). The currency started depreciating from late 2007 onwards.

When the first signs of the global financial crisis began to emerge in the summer of 2007, concerns were raised about Icelandic banks' loans made to companies with complex ownership structures and about them being less closely supervised than other banks in the EU. Reflecting these concerns, their borrowing costs rose more sharply than for most banks in Europe or the US. Despite these difficulties, Icelandic banks massively expanded foreign lending between July and December 2007.

With rising borrowing costs, the Icelandic banks turned to the CBI and ECB discount windows for funding, but they were soon out of bounds. Iceland's Parliament approved legislation empowering the government to borrow to bolster the reserves of the CBI, but high borrowing costs deterred the

government. In October 2008, the Parliament passed emergency legislation allowing the Financial Services Authority (FME) to intervene in the banks' operations and take them over.

The government partitioned the failed banks into new banks, which took over domestic deposits and loans booked through domestic branches, and old banks to be liquidated (OECD, 2009). Losses incurred on loans to the three main banks, bank securities held by the treasury, and costs related to loan guarantees led to an increase in the net government (and central bank) debt by about 14.5 percent of the GDP.

In November 2008, the government sought an IMF Stand-By Arrangement (SBA) to help build confidence in the recovery programme and to obtain necessary foreign currency funding at a reasonable cost.

Ireland

Ireland performed remarkably well between 2000 and 2007. GNP grew by 5.4 percent per year on average in real terms, propelling per capita income to above the EU average. But growth was heavily dependent on debt-driven property and housing markets. With the population growing, incomes expanding rapidly, and the European monetary union providing access to mortgage finance at historically low rates, there was a surge in the demand and ability to pay for housing (Whelan, 2011).

Private sector credit increased from 128 percent of annual GNP in 2002 to 215 percent in 2007, growing at an annual average rate of 20 percent. Mortgage lending was particularly buoyant; it expanded at an average annual rate of around 25 percent. Residential construction reached 13 percent of the GDP in 2006. Yet housing supply could respond only partially to rising demand. Thus, house prices in Ireland quadrupled in price between 1996 and 2007 (OECD, 2008).

The expansion of borrowing, particularly for property, was encouraged by the following: changes in the Irish economy; weak risk-management protocols and practices in the main lending banks; lower credit standards for mortgage lending; lax bank supervision; and the ability of the Irish financial intermediaries to borrow heavily in international financial markets.

In addition, a variety of property-related tax reliefs and incentives were provided at different times, contributing to demand for housing and real estate. Thus, household indebtedness rose substantially (OECD, 2009b).

Due to housing activity and surging house prices, the share of tax revenue from asset-based taxes rose steadily during the 1990s and then rapidly during the period after 2002. At the same time, there was a corresponding reduction of a similar magnitude in the amount of revenue collected from income tax. Rising demand did not result in any significant inflationary pressure on consumer goods, though rapid asset price inflation did occur. But, with rapidly rising consumption fuelling imports, the current account balance moved into deficit to reach around 5.4 percent of the GDP in 2007 (Whelan, 2011).

The collapse of the housing market resulted in a severe economic recession in the aftermath of a sharp tightening of financial conditions. As evidence built up of the scale of the Irish construction collapse, international investors became concerned about the exposure to the property investment loans of the Irish banks. These banks found it increasingly difficult to raise funds on bond markets. The government decided to give a near-blanket guarantee for a period of two years to the banks (Whelan, 2013).

The collapse in construction activity and the corresponding explosion in unemployment resulted in a large loss in income tax revenues and an increase in social welfare payments. Consumption fell sharply by almost nine percent from its peak by the first quarter of 2009, and it remained weak as households repaired their balance sheets.

Irish real GDP declined by 3.5 percent in 2008 and by 7.6 percent in 2009. After years of budget surpluses, Ireland was suddenly faced with a yawning fiscal gap. By 2010, it was clear to international financial markets that in addition to a serious problem with its budget deficit, Ireland was facing a large bill of uncertain size in relation to recapitalising its banking sector (Whelan, 2011 and Whelan, 2013).

The National Asset Management Agency (NAMA) was set up to issue government bonds to the banks to purchase distressed property assets

at a discount. The banks could issue bonds from late 2008 to early 2010 under the protection of the state guarantee. When the banks failed to find new sources of market funding to roll maturing bonds, they turned to the ECB for emergency funding. Borrowing from the ECB by the guaranteed banks jumped from 36 billion Euros in April 2010 to 74 billion Euros in September (OECD, 2011a).

The banks also began to run out of eligible collateral to use to obtain loans from the ECB. International markets became increasingly concerned that the Irish banking sector was going to destroy the credit-worthiness of the Irish sovereign.

Failing to see any sign of improvements in the banking sector, the ECB made its continued support for the Irish banking system contingent on Ireland applying to the EU and the IMF for a multi-year lending programme. Based on data up to 2011, the Irish banking crisis ranked as one of the most expensive banking crises in an advanced economy since the 1970s (Laeven & Valencia, 2012).

In November 2010, the Irish government agreed to a multi-year funding deal with the EU and the IMF. This was the first major correction Ireland had experienced since the European Monetary Union (EMU). It required adjustment to take place in a different way from the past, when the nominal exchange rate could be adjusted.

Portugal

Unlike other countries in the peripheral Eurozone, where economic growth had been sustainably high before the crisis, Portugal had experienced low growth since 2001. In the early 2000s, it experienced neither a housing boom like Spain and Ireland nor as rampant an increase in public debt as Greece, nor did it suffer from Italy's chronic political instability.

Spurred by EU membership, Portugal undertook a wide range of reforms to liberalise its economy and opened it to foreign trade and investment. These reforms paid off in terms of GDP growth, and Portugal managed a significant catch-up towards the living standards of more affluent OECD economies until the early 2000s. Between 2000 and 2005, Portugal was

in a slump, with anaemic productivity, almost no economic growth, high current account and budget deficits, and steadily increasing unemployment (OECD, 2010).

It wasn't until 2005 that economic growth picked up again, in part to a renewed effort at macroeconomic and structural reforms. Since then, over-reliance on consumption to induce growth, weak labour productivity gains, and insufficient wage moderation have led to a deterioration of competitiveness and significant external indebtedness. To regain competitiveness, Portugal, as a (premature) member of the Eurozone, could no longer depend on currency devaluation as a primary instrument for structural adjustment. Instead it had to adjust through 'internal devaluation' – i.e. through real relative wage declines and improved productivity growth.

Both occurred to an extent. Beginning in 2002, wage growth slowed considerably. The accumulated real effective exchange rate, measured in relative unit labour costs, rose by 3.6 percent in Portugal from 2003 to 2008 compared to 11 percent in the Euro area. Labour productivity in the second half of the last decade increased relative to average EU levels (Lourtie, 2011).

In terms of policy, the rate and span of badly needed structural reforms also increased during the period of low economic growth in Portugal. That was seen notably in outcomes related to education, investment in R&D, energy generation from renewables, improving the business environment, and labour market flexibility. The Portuguese government also implemented substantial pension and public administration reforms. Although the economy showed signs of correcting deficits in relative competitiveness and of more dynamism in exports, current account deficits nevertheless remained extremely high (Lourtie, 2011).

While the country was implementing several reforms during the 2000s, both the government and the country's private sector were accumulating debt at much too rapid a pace. In addition, fiscal headroom created by a decrease in sovereign yields as Portugal moved into the Euro area was more than offset by permanent spending increases.

Public expenditure rose by more than nine percent of the GDP in the decade between 2000 and 2010. In particular, spending on social benefits rose sharply, reaching 20.3 percent of the GDP in 2012, up from 12.2 percent of the GDP in 1995. Portugal adopted one of the largest Public Private Partnership (PPP) programs in the world for public investment, with a cumulative investment of 15 percent of the GDP (IMF, 2015).

On average, this implied higher fiscal deficit by roughly one percent of the GDP over the period in which these concessions were granted (1995–2010). Similarly, the state-owned-enterprise (SOE) sector expanded greatly, often to circumvent stricter policies applied to general government entities.

Most of the borrowing from abroad came through trade deficits with the rest of the European Union. Banks were at the centre of these capital flows, serving as the intermediary between foreigners and Portuguese firms and households. Chen, Milesi-Ferretti, and Tressel (2010) estimate that, in 2007, banks accounted for approximately half of Portuguese foreign debt.

Categorising gross capital flows into equity, foreign direct investment, and debt, Lane (2013) estimates that between 2003 and 2007, debt accounted for 68 percent of these flows. Capital inflows funded unproductive firms in the non-tradable services sector. Portuguese banks were particularly vulnerable to a shift in investor sentiment owing to excessive reliance on foreign borrowing and exposure to government bonds (especially in 2010). The banking system's aggregate net income turned negative in 2011, due largely to growing credit impairments and losses in financial assets portfolios (OECD, 2012).

The soft approach taken by Portugal to correct its more egregious economic and financial imbalances was too late and too slow when the global crisis hit. The economy went into recession in late 2008. The fiscal deficit reached 9.3 percent of the GDP in 2009 on the back of a large consumption and fiscal stimulus package after the country had been through a period of significant fiscal consolidation between 2005 and 07 (Figure 4). Relatively high public indebtedness combined with weak potential growth made fiscal consolidation a pressing concern once again.
Investors became more reluctant to buy Portuguese debt in the spring

of 2010, with spreads peaking in early May 2010. As a response, the government revised its fiscal consolidation programme by deciding to postpone some major investment projects and setting more ambitious deficit targets from 2010 to 2013, announcing additional consolidation measures.

Unlike Greece or Ireland, there was no single decisive event to undermine market sentiment. Contagion, Portuguese economic vulnerabilities, and risks stemming from austerity had added up to form negative market perceptions. In March 2010, the Portuguese government announced guidelines to meet the 2011, 2012, and 2013 fiscal consolidation targets and further structural reforms. These included the judicial reform, change in competition rules and housing laws, and adopted the Stability and Growth Pact for 2012-14 (OECD, 2011).

However, the Portuguese Parliament rejected the austerity package and the country headed for early elections. Political instability led to soaring interest rates for Portuguese bonds and rating agencies plunging Portugal's rating. With the financing conditions collapsing for both the sovereign and its banks and companies, in April 2011, the Portuguese government sought international financial assistance of 78 billion Euros from the EU and the IMF (IMF, 2016).

Greece

Greece entered the Eurozone without meeting the convergence criteria of three percent of the GDP ceiling on the government deficit. The Greek public debt level had been high (it was significantly understated when Greece adopted the Euro as its currency), fluctuating around 100 percent of the GDP since 1993. Adoption of the Euro in 2001 and loose global credit conditions in the 2000s allowed Greece easy access to foreign borrowing, which financed a significant expansion of government spending (IMF, 2013).

Easy access to credit, however, discouraged the governments of the 2001-2009 period from implementing sound economic policies and therefore allowed for further deterioration of fundamentals (Arghyrou & Tsoukalas, 2010). As a direct fiscal dividend, government interest expenditure dropped

from 11.5 percent of the GDP in the mid-1990s to five percent of the GDP in the mid-2000s. However, these savings were more than swallowed up by increased spending on wages and pensions.

In 2008, the general government deficit reached 15.5 percent of the GDP (after incorporating data revisions), up from four percent of the GDP in 2001. Public debt was 140 percent of the GDP by 2010, with 75 percent held by foreigners (Figure 5). There were also significant contingent liabilities due to public enterprises borrowing under state guarantee, while the pension system had become underfunded because of increasingly generous entitlements and an aging population (IMF, 2013).

The counterpart to the decline in government saving was a sharply widening current account deficit that reached 15 percent of the GDP in 2008 (Figure 2). The total net foreign debt, both public and private, rose to 105 percent of the GDP in 2010 (IMF, 2013).

Robust private credit growth following financial liberalisation served to boost household consumption. Real GDP growth averaged four percent from 2000 to 2007, higher than in all Euro area countries. Although asset price inflation and household indebtedness remained moderate, government debt mounted rapidly.

Growth remained positive until the end of 2008 due to relatively buoyant exports to the Balkans and large wage increases, which supported consumption. But persistent structural imbalances – illustrated by the poor state of public finances, tax evasion, and the large current account deficit – limited room for policy manoeuvre, and Greece's exposure to Southeastern Europe increased the country's vulnerability to the crisis (OECD, 2009c).

In the wake of a general increase in risk aversion when rating agencies lowered the ratings of Greek sovereign debt and those of the country's main banks based on the persistence of structural imbalances, the long-term sovereign interest rate spread vis–à–vis Germany started widening sharply in early 2009. From 200 basis points in December 2008, the spreads shot up to 477 basis points in April 2010 (OECD, 2011b). In October 2009, a new government took office and announced that the fiscal problem had

been significantly understated. Public debt estimates were also marked up sharply. Fitch responded by downgrading Greece's sovereign rating from A- to BBB+ (IMF, 2013).

Greek banks weathered the crisis initially, as they had to only deal with reduced liquidity. During 2009, there was a considerable slowdown in credit expansion to the private sector. From early 2009, owing to the restriction of funding sources, Greek banks started relying on the Eurosystem for raising liquidity. The worsening macroeconomic environment inevitably affected the quality of the Greek banks' loan portfolios. They became vulnerable to international turbulence through their exposure in Bulgaria, Romania, and Turkey. Bank claims in these countries were close to 17 percent of the GDP. Banks had substantial exposure to a contracting real estate sector in Greece. By 2010, Greek banks faced a considerable rise in the liquidity risk and deposit outflows (Alogoskoufis, 2012).

A support package of 28 billion Euros was adopted to boost confidence and liquidity in the banking system and to support credit growth to the private sector. It contained measures to increase the statutory guarantees for deposits with credit institutions, aid to bolster bank capitalisation (including government acquisitions of equity), and guarantees to support bank liquidity. In May 2009, the Bank of Greece conducted a comprehensive stress test of the Greek banking system with the IMF.

As part of the European Commission (EC) excessive deficit procedure (EDP), Greece was obliged to undertake measures by October 2009 to bring its deficit back to three percent by 2010 from five percent of the GDP in 2008. Thus, the government was forced to limit its crisis-related fiscal support to the most vulnerable groups and key economic sectors. After the austerity plan was adopted, growth prospects weakened substantially.

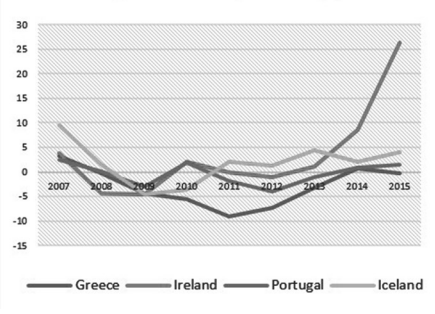
In December 2009, Greece committed to achieving fiscal consolidation via a Stability Programme with the EC that aimed to cut the deficit from 12.5 percent of the GDP to 8.75 percent in 2010 and by a further three percent in 2011 and in 2012. As part of the process, public sector wages were frozen, civil servant bonuses were partially cancelled, and indirect taxes were increased.

However, by early 2010, the Greek government faced a major crisis of confidence. Contagion from Greece was a major concern for Euro area members given the considerable exposure of their banks to the sovereign debt of the Euro area periphery. Assurances by the Eurogroup that it would stand by Greece failed to convince sovereign bond markets.

By late March, it became apparent that the Greek government was unable to refinance maturing debt or raise new capital. At the end of April 2010, Eurozone countries agreed to provide to Greece with 80 billion Euros in bilateral loans, coordinated by the European Commission, with an additional amount of up to 30 billion Euros available from the IMF. In July 2011, as it gradually appeared unlikely that Greece would be able to return to the markets in 2012 as originally envisioned, Eurozone countries agreed to an additional official financing of 109 billion Euros (Alogoskoufis, 2012).

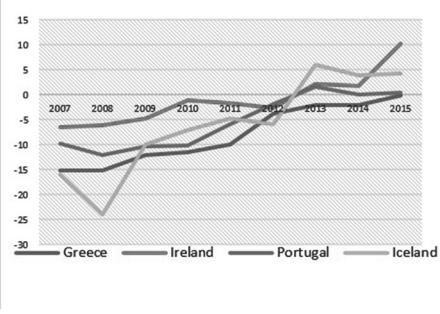
The adjustment challenge faced by the four countries differed both in nature and extent. Therefore, the required policy mix and the ability to implement policies also differed significantly. Although this differentiation was important, the key elements of the structural policy framework were broadly applicable across these countries, albeit with differing degrees of emphasis.

Figure 1. *Real GDP growth rate (%)*



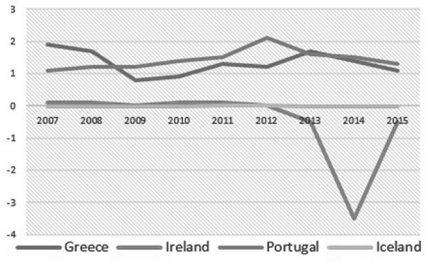
Source: Eurostat (2016)[1]

Figure 2. *Current account as % of GDP*



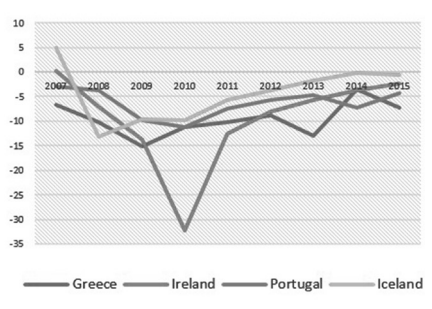
Source: Eurostat (2016)[2]

Figure 3. *Capital account % of GDP*



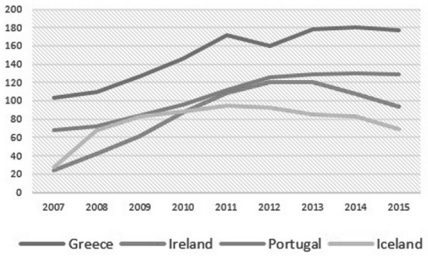
Source: Eurostat (2016)[3]

Figure 4. *Fiscal balance as % of GDP*



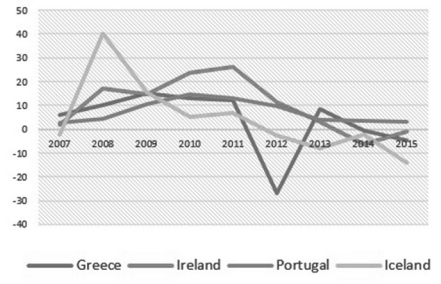
Source: Eurostat (2016)[4]

Figure 5. *Government debt (nominal value) as % of GDP*



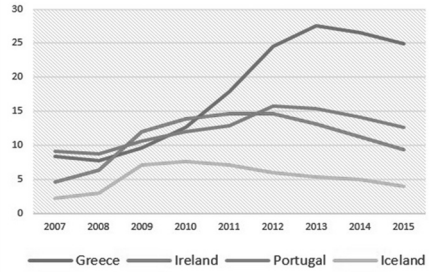
Source: Eurostat (2016)[5]

Figure 6. *Change in government debt (% of GDP)*



Source: Eurostat (2016)[6]

Figure 7. *Unemployment rate*



Source: Eurostat (2016), OECD Stat (2016)

[1] *http://ec.europa.eu/eurostat/data/database accessed 10/9/2016*
[2] *http://ec.europa.eu/eurostat/data/database accessed 10/9/2016*
[3] *http://ec.europa.eu/eurostat/data/database accessed 10/9/2016*
[4] *http://ec.europa.eu/eurostat/data/database accessed 10/9/2016*

THE IMF/EU ADJUSTMENT PROGRAMMES

The economic stabilisation programmes, designed to restore confidence in affected economies, included measures to restore fiscal sustainability by implementing sound banking strategies and structural reforms.

The first pillar of the programmes was related to achieving fiscal sustainability and included correction of excessive deficits, significant tightening of the structural balance, privatisation, targeted expenditure rationing, targeted revenue measures, and better fiscal control over public-private partnerships and SOEs.

The second pillar focused on financial stability with immediate attention to strengthening the banking sector, reforming the banks' operations, revising financial regulation in accordance with international best practice, recapitalisation, and safeguarding the financial sector against disorderly deleveraging through market-based mechanisms supported by backstop facilities.

In the case of Iceland, the adjustment programme had also included capital controls to prevent capital flight and focused on rebuilding monetary policy credibility by stabilising inflation at low levels. For the Euro area in the absence of the exchange rate lever, structural reforms were necessary to facilitate internal devaluation and boost economic growth.

Accordingly, the third pillar of the programmes consisted of structural reforms to allow a return to a robust and sustainable growth. Reforms included, in particular, reforms in the labour market, improving competitiveness, increasing competition in labour and product markets, boosting productivity, and improving the business environment.

THE PATH, NATURE, AND SPEED OF ADJUSTMENT

Iceland

In Iceland's case, agreements were reached with the creditors of each of the old banks by the end of 2009 on compensation instruments for the net assets transferred to the new banks, enabling the new banks to be capitalised. Empowered by emergency statutory authority gained at the

time of the crisis, the FME imposed stricter capital standards on the new banks, doubling the required capital adequacy ratios (CAR) from the Basel II minimum of eight percent to 16 percent (FME, 2009).e The Icelandic authorities consistently adopted an approach of making shareholders in failing banks absorb losses first and, once capital was exhausted, exposing non-priority unsecured creditors to losses.

Although the size and scale of Iceland's banks relative to the size of Iceland's economy did not give the government the option of rescuing them, losses were imposed on creditors even for small savings banks. This helped strengthen market discipline. Allowing insolvent banks to fail accelerated the necessary downsizing of their balance sheets (OECD 2009a). The assets of Iceland's credit institutions fell from a peak of around 11 times the GDP to about 2.5 times the GDP in 2011.

The main downside was that the government damaged its reputation for upholding private property rights by changing the ranking of creditors in the Emergency Act of 2008 to the benefit of depositors at the expense of the other creditors.

Prudential regulation and supervision were reformed to prevent the practices that most contributed to the failure of the banks from recurring. Legislation in 2014 created a Financial Stability Council (FSC) – composed of the heads of the CBI, FME, and the Ministry of Finance and Economic Affairs – with a broad mandate to formulate financial stability policy, assess threats to stability, and recommend policy actions.

Economic recovery was initially led by private consumption, which was temporarily boosted by write-downs of household debt, households drawing down their pension assets and special payments from banks and the government, and residential and business investment. Private consumption expenditure and residential investment have continued to expand, supported by employment growth and wealth gains from rising house prices (IMF, 2008).

[1] With these agreements, the new banks were capitalised to a high level on average (a risk-adjusted CAR of around 16 percent, with a Tier 1 ratio of around 12.5 percent) by the end of 2009. It was a high level (16 percent) by international and historical comparison in view of the high level of uncertainty about the value of the banks' loan portfolios.

Iceland exemplified that monetary policy was an ineffective tool to stabilise a small open economy facing a mismanaged financial liberalisation process and developments in global capital markets (Elíasson & Pétursson, 2009) that eluded its capacity to control.

The collapse of the banking sector led to a recalibration of the monetary policy objectives. The effective exchange rate had plunged 40 percent by early October 2008 compared to its level at the beginning of the year. Stabilising the Icelandic króna was a fundamental element of the programme for economic recovery. Consequently, exchange controls on capital movements were introduced to prevent a disorderly outflow of capital held by foreigners (about 40 to 50 percent of the 2009 GDP).

Inflation came down from a peak of 18.6 percent in 2008 to 2.8 percent in April 2011. Since the crisis, inflation has come down to levels in line with the CBI target, aided in part by the disinflationary global environment and by diminished variability in the exchange rate from capital controls.

The large current account deficits that Iceland had been running during the boom years were eliminated in the wake of the financial crisis. This turnaround was attributable to the contraction in imports caused by the collapse in domestic demand and a large real exchange rate depreciation. After a sharp depreciation at the onset of the crisis, the króna settled at a competitive level, boosting net exports and avoiding a further deterioration in private and public sector balance sheets (OECD, 2009a).

Gross government debt, which had shot up to 120 percent of the GDP in the wake of the financial crisis, was reduced to 85 percent of the GDP in 2014 (Figure 5). Iceland designed a fiscal consolidation programme to place public finances on a sustainable path, restore access to outside lending, reduce the sovereign risk premium, and reduce vulnerability to future crises.

Slightly more than half of the improvement was achieved through revenue increases. The direct tax system became more progressive with an increase in the flat tax on capital income as well as the reintroduction of a wealth tax. Most of the reduction in expenditures (excluding write-offs) was

achieved by cutting government investment and non-wage consumption.

While economic recovery has progressed, growth is much slower than during the previous expansion. Business investment has slowed sharply, mainly owing to declines in shipping and aircraft investment and energy-intensive industry investment (Figures 12 and 14). With financial institutions restructured, the remaining requirement for restoring normal financial intermediation services was to restructure non-performing loans (NPL) or foreclose if that resulted in smaller losses.

However, progress in restructuring the banks' NPLs or foreclosing on them has been slow. By late 2010, NPLs had only fallen to about 40 percent of the book value of the banks' loan portfolios from a peak of 45 percent in late 2008.

Ireland

Ireland had several advantages: a large export sector (exports of goods and services exceed 100 percent of the GDP); a friendlier environment in which to do business; a more efficient tax system with a lower tax wedge on labour; more stable and lower corporate taxes; and more flexible and well regulated product and labour markets. Ireland's structural strengths were reflected in the relatively few structural reform conditions incorporated in its financial assistance programme.

Ireland continued to attract and benefit from foreign investment throughout the crisis. The fiscal deficit was brought under control through expenditure measures adopted by the government, including cutting public sector wages, social welfare, and capital spending. Around 60 percent of the consolidation measures implemented from 2008 to 2012 were on the expenditure side (OECD, 2011a).

Revenue was increased from 2011 onwards by broadening the income tax base, reducing the tax relief on pension contributions, cutting other tax expenditures, introducing an interim property (site value) tax, increasing the carbon tax, and reforming capital gain taxes. Between 2009 and 2014, the fiscal deficit (excluding bank-related financial measures) fell from 11.5 percent to four percent of the GDP, while gross public debt fell from a peak

of 120.2 percent of the GDP in 2014 to 98.4 percent in 2015 (Figures 4 and 5) (OECD, 2015).

Export growth has been strong, as Ireland has gained market share thanks partly to improved cost-competitiveness since 2009. Labour costs adjusted swiftly after the onset of the crisis. Relative unit labour costs declined by about 16 percent by the end of 2012. The current account balance reversed significantly from -5.7 percent of the GDP in 2008 to 3.6 percent of the GDP in 2015 (Figure 2) (OECD, 2015).

However, the long-term unemployed and those outside the labour market still account for a larger share of the working-age population than before the crisis. Private-sector (households and non-financial corporations) debt remains high at 290 percent of the GDP, well above the Euro area average of about 165 percent (OECD, 2015).

In response to the 2008 banking crisis and the burst of the housing bubble, the authorities consolidated financial regulation in the central bank, adopting more risk-based and intrusive supervision; transferred large bad property loans to NAMA (a 'bad bank'); and undertook capital injections, liquidity support, and government guarantees. In addition, Ireland introduced a special resolution regime for banks, strengthened the deposit insurance scheme, issued a code of conduct to address mortgage arrears, and reformed the personal bankruptcy regime.

The banking sector has since returned to profitability in 2014, mainly due to a reduction in impairment charges, but non-performing loans still account for just under a fifth of the value of outstanding loans. The NPL ratio peaked at 25.7 percent in 2013. The share of very long-term mortgage arrears (720 days and over) in total arrears is still increasing, albeit at a much slower rate. Domestic credit to businesses is still constrained (Figure 14) (OECD, 2015).

Portugal

In Portugal, a process of rebalancing the economy from non-tradables to tradables had begun before the start of the IMF/EU programme in 2011. In the tradable sector, unit labour costs decreased by almost five percent

between 2009 and 2013, while adjustment in the non-tradable sector started only in 2011, leading to a decrease in unit labour costs of 1.5 percent between 2011 and 2013.

Unit labour costs experienced a particularly large fall in 2013, originating largely in the public sector. The regular work-week of central government employees was raised from 35 to 40 hours with no pay rise in September 2013.

Significant progress has been made in improving Portugal's external position, as evidenced by the elimination of a long-standing current account deficit and strong growth in exports. By the end of 2013, exports had increased to over 40 percent of the GDP, compared to less than 30 percent of the GDP before the crisis. Its 11-percent-of-the-GDP improvement in the current account balance was the largest and the first surplus in more than 40 years (Figure 2) (OECD, 2014b).

This adjustment process was partly due to a contraction in domestic demand amid reduced private consumption and investment but was also supported by improving competitiveness due to wide-ranging labour and product market reforms, with an annual decline in unit labour costs relative to the Euro area of two percent over the 2011-2013 period.

Exports have been driving economic growth on the heels of sustained gains in market share by Portuguese exporters since 2010, outpacing most of their European competitors and reforms implemented in the 2000s. These gains have been broadly based and are testament to the flexibility of Portuguese firms to shift to external markets in the face of stagnating domestic demand, as well as to marked improvements in international competitiveness (OECD, 2014a).

The structure of Portuguese exports changed significantly. Merchandise exports now account for 70 percent of overall exports and are fairly diversified across a number of sectors. In services, the common language has facilitated rising exports of medical services, construction activities, and legal advisory services to Lusophone Africa (Arnold, 2015).

With an average current account deficit of almost 10 percent of the GDP between 2000 and 2009, Portugal showed improvement in export performance after 2010 and turned a small surplus of 0.5 percent of the GDP in 2013. Portugal needs to export more in the coming years, as its external debt is very high at 221 percent of the GDP, and it will need to be reduced through sustained current account surpluses (Arnold, 2014).

Between 2011 and 2015, the budget deficit fell from 7.4 percent to 4.4 percent of the GDP, while gross public debt has risen from 111 percent of the GDP in 2011 to 129.1 percent in 2015 (Figure 5). Permanent consolidation measures totalling some 12.5 percent of the GDP (ex-ante assessment) were implemented between 2011 and 2013. On the expenditure side, consolidation has been achieved via reductions in the public-sector wage bill, intermediate consumption, and public investment, whereas on the revenue side, consolidation has been mainly attributable to income tax increases (IMF, 2016a).

The combined stock of arrears for the general government sector and SOEs outside the general government fell from about 4.3 billion Euros (2.5 percent of the GDP) at the beginning of the Programme in May 2011 to about two billion Euros (1.2 percent of the GDP) by July 2014.

After implementing reforms aimed at streamlining the functioning of the public sector to reduce fiscal risks, as well as an increase in VAT and direct taxes, Portugal has achieved a significant structural primary surplus since 2012 and a significant reduction in the overall fiscal deficit. However, this is still short of original programme objectives. Efforts to reduce the public wage bill and rein in pension expenditures have been hindered by recurrent adverse rulings by the Constitutional Court (CC). Portugal still faces the challenge of building a more competent public administration while reducing public employment and the wage premium relative to the private sector (IMF, 2016b).

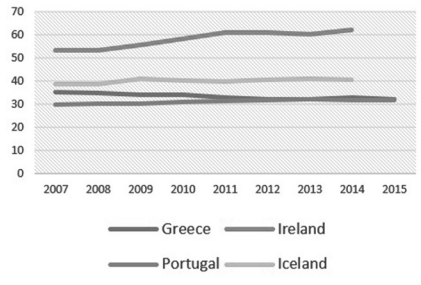
The banking sector suffered from difficult access to wholesale funding

[1] *In particular, the CC required: (i) the fiscal consolidation burden to be shared between civil servants and the rest of the population; and (ii) wage bill consolidation to take place through structural reforms of public employment, rather than nominal cuts in wages.*

in the aftermath of the financial crisis and has since relied more strongly on deposits, which have been resilient. To reinforce market confidence and comply with capital ratio requirements, banks have increased their capital. But high (and still rising) NPLs reflect the weak profitability and excessive indebtedness of a large segment of Portuguese firms. They are also reflective of lower lending standards by banks in the run-up to the crisis (Figure 14) (IMF, 2016b).

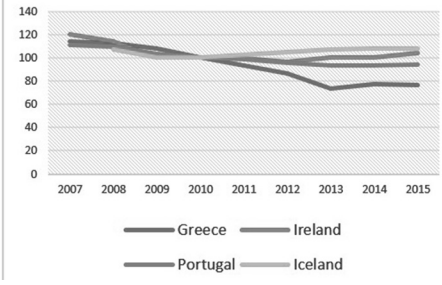
The banking sector suffered from difficult access to wholesale funding in the aftermath of the financial crisis and has since relied more strongly on deposits, which have been resilient. To reinforce market confidence and comply with capital ratio requirements, banks have increased their capital. But high (and still rising) NPLs reflect the weak profitability and excessive indebtedness of a large segment of Portuguese firms. They are also reflective of lower lending standards by banks in the run-up to the crisis (Figure 14) (IMF, 2016b).

Figure 8. *Level of GDP per capita and productivity (%)*



Source: Eurostat (2016)[1]

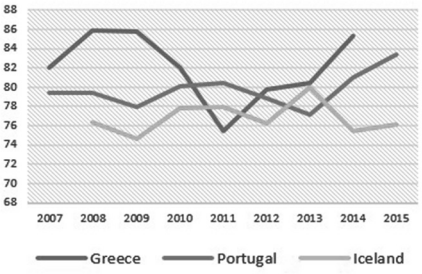
Figure 9. *Labour input in industry (Index 2010=100)*



Source: Eurostat (2016)[2]

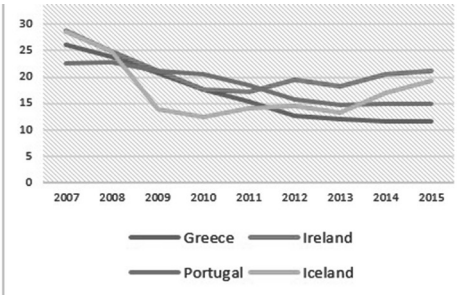
[1] *http://ec.europa.eu/eurostat/data/database accessed 10/9/2016*
[2] *http://ec.europa.eu/eurostat/data/database accessed 10/9/2016*
[3] *http://ec.europa.eu/eurostat/data/database accessed 10/9/2016*
[4] *http://ec.europa.eu/eurostat/data/database accessed 10/9/2016*

Figure 10. *Labour transition (to the same or higher qualification level) as % of population*



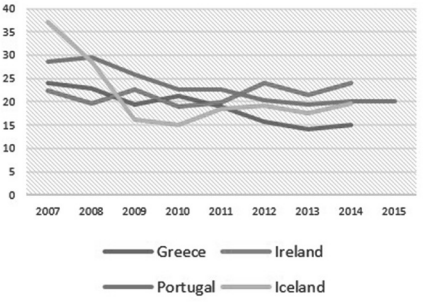
Source: Eurostat (2016)[3]

Figure 11. *GFCF (current prices) as % of GDP*



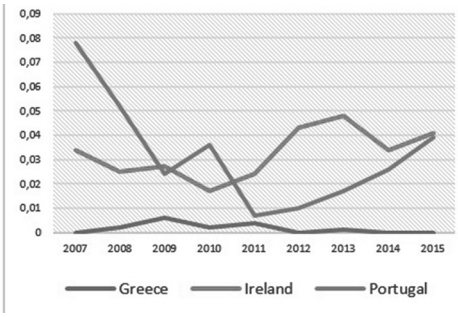
Source: Eurostat (2016)[4]

Figure 12. *Investment rate of non-financial corporations (%)*



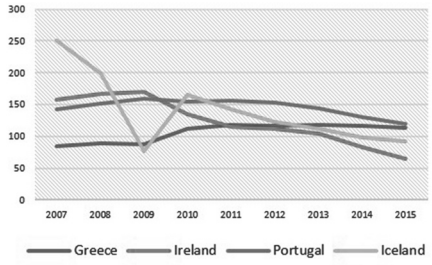
Source: Eurostat (2016)[5]

Figure 13. *Venture capital investments as % of GDP*



Source: Eurostat (2016)[6]

Figure 14. *Domestic credit to private sector (% GDP)*



Source: Eurostat (2016)[7]

WHY ADJUSTMENT FAILED TO OCCUR IN GREECE

Greece initially held up better during the global economic crisis than many other countries. However, it was afflicted by high public debt, repeated fiscal slippages, and large external and internal imbalances. Greece was advised to curb tax evasion, improve tax collection, cut administrative costs, rationalise and limit its wage bill, reform loss-making state enterprises, and undertake pension reforms. The Greek authorities resolutely implemented substantial fiscal consolidation and wide-ranging structural reforms.

The budget deficit was cut by about five percent of the GDP in 2010. Pension and healthcare reforms have enhanced long-term fiscal sustainability, while structural reform has improved labour market flexibility and cost competitiveness. Revenue has increased from 2010 onwards by increasing the income and sales tax rates, while corporate tax rates have risen from 2013. Between 2010 and 2015, the budget deficit fell from 11.1 percent to 7.6 percent of the GDP before rising to 12.4 percent in 2013, while gross public debt rose from 146 percent of the GDP in 2010 to 179 percent in 2015.

The strong fiscal contraction reduced domestic demand dramatically. But the adjustment programme agreed upon in 2010 between the Greek authorities, the IMF, the European Commission, and the ECB did not yield the expected results in restoring growth.

Economic activity has been hit much harder in Greece than in other Eurozone countries with adjustment programmes, such as Ireland and Portugal. Market confidence has not been restored yet, the banking system has lost 30 percent of its deposits, and the economy has encountered a much deeper than expected recession with exceptionally high unemployment. Even as Greece cut spending deeply and raised taxes, public debt has remained too high and was eventually restructured in 2012, with collateral damage for bank balance sheets that were already weakened by the recession.

As in Portugal, Greece has been unable to implement all the reforms required by the adjustment programme. Yet investors have doubted the ability of the reforms in Greece to deliver growth and fiscal consolidation. An OECD competition assessment report (2013) identified a wide range

of regulations and legal provisions that undermined competition in sectors like food processing, retail trade, building materials, and tourism.

Lack of competition and rent seeking behaviour has led to Greek businesses and consumers paying a very heavy price in the form of a total of 5.2 billion Euros in lost efficiency and higher prices for goods and services. The government has been unable to implement the ambitious privatisation programme to any significant degree. This might be due to a lack of effective social dialogue between government and civil society, resulting in a lack of public understanding and acceptance of reform measures. Unit labour costs in Greece have not adjusted as swiftly as they did in Ireland. They started falling from 2012 onwards, initially by 2.33 percent. Since 2013, unit labour costs have fallen by more than 30 percent (Eurostat).

Although competitiveness improved on the back of falling wages, Greece's exports of goods and services still underperformed, unlike in the cases of Ireland and Portugal. Greece's current account to GDP ratio has been rising since 2008, when it was the lowest at -14.9 percent (Figure 2). According to the OECD (2013), this was because Greece's export markets have been weak and its price competitiveness has not improved nearly as much as its cost (wage) competitiveness.

This could be related to stalled structural reforms and a lack of productivity gains (Figure 9). This suggests that the liberal trade and investment policies that support structural adjustment by contributing to growth, innovation, and competitiveness have been implemented neither gradually enough to enable affected parties to adapt nor quickly enough to avoid policy reversal.

The economy has shrunk by 22 percent since 2010, with the unemployment rate remaining at a very high 24.3 percent in 2015, marginally lower than the all-time high of 27.88 percent in 2013 (Figures 7 and 8). The sustained high unemployment rates show that labour market policies to help develop workers' skills and facilitate labour mobility (Figure 10) across occupations, firms, industries, and regions have not shown results as yet. This suggests that the mobility of labour is still constrained, disallowing its reallocation to more efficient uses and preventing an increase in its productivity.

At the same time, Greece has been unable to provide adequate assistance to groups and sectors that have experienced significant adjustment costs but derived few adjustment benefits because of the excessive deficit procedure (EDP). The sustained economic decline seen in Greece since the adjustment programme is akin to that in countries associated with war or natural disaster.

This situation reflects shortcomings in the design of the original programme, especially the cost and maturities of the loans provided to cover programme-funding needs. This was the first ever programme with a member of the Eurozone; i.e. the first that issues a reserve currency. This was also the first ever programme in which there was an absence of an exchange rate lever, with Greece being politically committed to remain in the Eurozone (Ireland and Portugal followed Greece's adjustment programme).

An internal IMF report on the bailout strategy has acknowledged that the IMF considered the prospect of lending to a Eurozone country to be unlikely and had not set out how such programmes might be designed. Contagion from Greece was a major concern for Euro area members given the considerable exposure of their banks to Greece's sovereign debt. The immediate objective of the joint rescue programme was to quell market fears that the Eurozone itself could break up and build firewalls to contain the spillover in the Eurozone economies. Against this backdrop, the programme was considered a necessity, although there were misgivings about Greek debt sustainability.

The programme helped Greece remain in the Eurozone, and contagion was contained, but Greece's economic problems haven't disappeared. The rescue programme was intended to buy Greece time to stabilise its public finances, but programme financing was used to repay maturing bonds in 2010 and 2011, thereby exacerbating the crisis. Non-resident holdings of government debt dropped sharply in the 2010-12 period. There was a large-scale substitution from privately held to publicly held debt, and this shift was intensified by market access not being regained in 2012 (IMF, 2013).

Deep fiscal adjustment and the austerity conditions of the adjustment programme have led to an economic depression, and economic imbalances

have kept growing, preventing the economy from reaching a more sustainable equilibrium where key accounts are brought into balance and allowed to grow sustainably and strongly thereafter. The overall effect of the 2010 programme has increased Greece's debt burden further. So, while Greece went into an economic depression, Portugal and Ireland marched along the road to recovery.

The programme also helped in ensuring stability of the banking system and protected deposits. In 2012, the four largest banks were recapitalised by a total of 18 billion Euros, thereby restoring their capital adequacy and improving their liquidity. Greece also restructured its banking system through the establishment of bridge banks, the transferring deposits to other banks; and the transferring of a bank's sound part to another bank followed by the reestablishment of the part as an interim credit institution and selling it within a short time frame. But the lingering risk to the banking system remains, and the economic depression has led to a continuous increase in NPLs and a solvency crisis.

In 2011, European leaders agreed to a new financial support package for Greece, the key provisions of which included reduced interest burdens, a meaningful extension of maturities, some private-sector involvement, protection of Greek banks, and measures to foster economic growth in Greece. The approach again included more official loans for more austerity. Although relief was made on official debt payments, continuing austerity has made a return to growth impossible. Thus, even as Greece cut spending deeply and raised taxes, the debt-to-GDP ratio has risen. Without meaningful debt relief, there is little chance that Greece will be able to grow in the medium term. An IMF decision is awaited on whether it will participate in a third rescue programme, as it now seeks meaningful debt relief.

CONCLUSION

The policy challenge in the four countries was related to reforms in structural policies affecting the functioning of labour and product markets while providing effective income support and reemployment services to those who had lost their jobs.

However, in the case of Greece, the country had little room for any fiscal manoeuvre to provide meaningful unemployment benefits and active labour market programmes to help cushion the cost of adjustment for the affected individuals. Additionally, it has been burdened with several regulations and legal provisions that constrain competition in several product markets. Given these rigidities and constraints, the design of the first bailout programme that focused on repaying non-resident Greek debt holders aggravated the situation. While Ireland, with its open economy and flexible labour markets, adjusted quickly and witnessed steady growth in its GDP, its banking sector is still afflicted by significant NPLs, and long term unemployment has remained high.

On the back of labour and product market adjustments, Portuguese firms have been successful in expanding to newer markets in Lusophone Africa. In Greece, on the other hand, lower primary surplus and a weak reform effort have led to substantial new financing needs. Given the high existing stock debt, new financing needs and debt servicing have rendered Greek debt dynamics unsustainable.

To make Greek debt sustainable, the maturities of existing European loans not only need to be extended significantly but also need new financing to be provided on more concessional terms. However, given the extensive contraction of the Greek economy since 2010, significant haircuts on existing debt seem absolutely necessary if there is to be any prospect of Greece adjusting successfully and returning to a growth path.

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Turkey in Africa: Lessons in Political Economy

Brendon J. Cannon[1]

Abstract

Turkey's relatively recent engagement with sub-Saharan Africa has been the subject of debate among scholars and policymakers. Various attempts have been made to answer questions such as "Why Africa?" and "Why now?", but these have largely ignored two key variables explaining Turkey's foray: structural/political economy factors within Turkey and within various African states; and African reactions to Turkey's engagement. Using a comparative approach and by exploring the African side of the equation as well as deconstructing the contours of Turkey's engagement with Kenya and Somalia, I argue that Turkey's commitment of resources to Africa has been positively shaped by six key factors. These are the timing of Ankara's initial engagement; the capacity for risk of the Turkish government and businesses; Turkish products and expertise; the projection of Turkish 'soft power'; generally positive or unformed views of Turkey in Africa given its lack of imperial baggage; and Turkey's highly coordinated and unilateral approach to engagement with African states and leaders, which generally eschews entanglements with international organisations or other alliances. These factors are crucial to understanding Turkey's nascent successes in sub-Saharan Africa, but certain political, economic and social factors – if left unaddressed – could spoil what currently seems a mutually beneficial engagement. Should Turkey positively address these deficiencies and better understand Africa and Africans in the process, it could become an indispensable partner, not only for Kenya and Somalia, but potentially for much of eastern and southern Africa.

Keywords: *Political Economy, Turkey, Soft Power, Sub-Saharan Africa, International Relations, Somalia, Trade, Kenya, Security, Balance of Trade.*

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INTRODUCTION

The Republic of Turkey's projection of power in Africa has met with a largely positive reception inside and outside of Africa. Though Turkey's decision to engage with Africa stretches back 20 years, it is under the leadership of President Recep Tayyip Erdoğan and his AK Party (AKP) that the real drive began and has produced positive dividends. Yet the drivers of Turkey as a rising power in Africa remain ephemeral and ill defined. So too are answers to questions concerning why Turkey's engagement with Africa is novel and asking what can Turkey do to capitalise on its recent successes and its status globally as a rising power.

Using the cases of Somalia and Kenya, I argue that Turkey's unilateral, highly coordinated approach to sub-Saharan Africa – utilising both the hard and soft power tools at its disposal – may be replicated elsewhere on the continent. Should Turkey adopt the same unilateral, highly coordinated approach to taking risks as it has in Somalia and, to a lesser extent, in Kenya, Turkey may increasingly be viewed as an 'essential power' beyond its immediate neighbourhood. The implications for both Turkey and Africa are potentially far-reaching. Turkey's position could shift from being primarily humanitarian and economic to more political, offering a third option as a strategic and diplomatic partner to African states or regional blocs. African states such as Ethiopia and Somalia could cooperate increasingly with Turkey in financial, security, and diplomatic developments both internal and external to their states and Africa, thus bypassing other partners whose efforts and aid often are deemed to come with negative fiscal burdens, such as China (Alves, 2013), or internal meddling by the likes of the US, the European Union, or the UK (Alden & Barber, 2015). This is possible because African views and opinions regarding Turkey in general are either nascent or positive, particularly given the example of Turkey's role in Somalia (Özerdem, 2013; Ankomah, 2016). This contrasts with African views of China and the US, for example (Ali, 2011). Furthermore, many African leaders are currently looking at alternative political and economic partners beyond those traditionally found in the East and West (Cannon, 2016b).

Section I of this article explores Turkey's efforts in Somalia. Section II compares and contrasts these efforts with those of Turkey in Kenya. Though

geographic neighbours, I have attempted to compare Somalia and Kenya using a 'most different' comparative analytical approach, and I hope the results prove more reliable and valid than a 'most similar' approach. The results should also be generalisable – at least on a surface level – to other Horn of Africa and East African countries, and perhaps to Anglophone African states and states such as Ethiopia that did not experience significant periods of colonialism. Section III explores avenues of potential promise as well as pitfalls affecting the current Turkey-Africa relationship. Section IV concludes the paper by offering basic policy prescriptions by looking at current and potential risks beyond security for both Turkey and its African partners.

TURKEY AND SOMALIA

The results of Turkey's development and diplomatic efforts in Somalia are striking. Turkey has only been involved in Somalia since 2011, yet it can point to a string of successes, physical edifices, and an arguably outsized presence in the country (Harper, 2013). Turkey's overall efforts in Somalia and its projection of soft power in the forms of money, trade, in-kind donations, infrastructure rehabilitation, and development projects have met a positive reception inside and outside of Somalia. In my analysis of Turkey's efforts in Somalia, I argue that Turkey's timing, capacity for risk, products and expertise on offer, soft power assets, and ability to effectively project this power, as well as a coordinated and unilateral approach, have paid dividends for Turkey on the humanitarian, diplomatic, economic, security, and political fronts, leading to its increased status as a rising power (Cannon, 2016a). In addition, Turkey's lack of historical and political baggage in the eastern Africa region has been a net positive. That is, while many studies have cited Turkey's Ottoman past as a partial impetus for Turkey's engagement in Somalia (International Crisis Group, 2012), for example, I argue that this is decidedly not the case. Rather, Turkey's status as an unknown quantity in the region has smoothed its acceptance as an emerging power and viable, alternative partner (Cannon, 2016a, p. 105). In order to offer further analysis and understanding, I explicate the variables behind Turkey's foray into and successes in Somalia below.

Timing

It is impossible to understand Turkey's successes in Somalia if one ignores when Turkey became involved in Somalia. Turkey fortuitously waded into Somalia in late 2011. In this the Turks were blessed with good timing, even though dabbling in what is considered the world's prime example of a failed state necessarily carries great risk. However, Turkey's involvement happened at a time when, by most estimates, the threat of terrorism had ebbed in large parts of Somalia, in particular in Mogadishu (Tran, 2011). Furthermore, a new famine crisis brought Somalia back to international headlines. Thus, Turkey was able to put in place positive, coordinated actions that brought relief and long-term commitments because the security situation allowed for such operations. Correspondingly, with Somalia again in the news for negative reasons, Turkey's successful efforts were understood locally and internationally as proactive and positive (Lough, 2012). Turkey succeeded not only where so many others had failed but also succeeded quickly. If Turkey had embarked on its foray into Somalia 10 years earlier when the security situation was dire, it is safe to say that its ability to achieve success would have been severely curtailed.

Somali resilience

With the election of the Somali Federal Government (SFG), the first in over 30 years,[2] Turkey was blessed with willing partners who had a mandate to rule and distribute resources until well into 2016. In addition, intrepid Turkish businesses found willing partners in Somalia. Though a bit cliché, trade and entrepreneurship are considered by many to be the lifeblood of the Somali people and have flourished in many areas during the last two decades in spite of the instability, terrorism, and lack of infrastructure (Nenova, 2004). Given the relative peace and stability dating from late 2011, a relatively stable government, and the entrepreneurship of Somalis, the access to cash inflows and technology have increased, thus easing Turkey's transition into Somalia.

Capacity for risk

Turkey is now viewed globally as a political and diplomatic rising power largely because of the risks it has taken in Mogadishu and its subsequent successes (Kubicek, Dal, & Oğuzlu, 2016; Çağaptay, 2013). It is important

[2] *The previous, post-civil war governments were transitional and referred to as the Transitional Federal Governments (TFGs) of Somalia.*

to note that much of the literature involving Turkey's role in Somalia has argued that Turkey found virgin territory in Somalia; i.e. a lack of interested actors (Heaton, 2012; Sezgin & Dijkzeul, 2015; Linehan, 2013). In reality, nothing could be further from the truth. Indeed, I argue that the presence of too many interested actors with competing aims has contributed to the protracted crisis in Somalia (Cannon, 2016a, p. 114-115). Yet, herein lies the positive nature of Turkey's role in Somalia. That is, in order to involve itself in Somalia, Turkish political and business leaders needed a large appetite for risk, realising that the potential payback could be significant. I hypothesise that the economic rationale for risk among Turkish businesses, particularly the so-called Anatolian Tigers, is a result of Turkey's foray into northern Iraq over the past decade and, prior to that, in Central Asia (Cannon, 2016a, p. 106). In learning to quickly play the 'Somalia game' like other actors, it has gained access to Somalia's leaders and grabbed up lucrative contracts in the process, but it has also proceeded to positively add to Somalia's economic and social capacity. This has been done by building of roads and hospitals, running the port and airport, offering international air connections, and overseeing a series of robust humanitarian efforts. It has also come in the form of hard power assets and cooperation, including troop training (Wasuge, 2016) and the building of Turkey's first military base in Africa in Somalia (Knodell, 2016).

Products and expertise

The risks taken by Turkey in Somalia have translated into the form of greater potential Somali dependence on Turkish goods, expertise, and services. Somalia has become a destination for Turkish goods and services, to include construction material, medical equipment, education development and schools, engineering expertise, and household items that range from teapots to clothing. And the Turkish presence is ubiquitous. According to one Somali resident, "Turkey has become the McDonald's of Mogadishu. Their flags are everywhere, just like the yellow arches of McDonald's are everywhere in America" (Harper, 2013, p. 164). Additionally, expertise in the form of engineering, management, medicine, education, and security (military and counterterrorism) has been largely welcomed given the high demand for such readily-available services in Somalia ("Turkey finalizes", 2016).

Soft power

Turkey's pragmatism in Somalia leads it to simultaneously pursue self-interested goals (prestige as a rising power) as well as furthering its business interests. But it also has led Turkey to deploy an array of soft power approaches, from educational opportunities for Somalis to diplomatic fraternity to humanitarian actions (Özkan, 2012, p. 22). Indeed, some have argued that Turkish policy in Somalia vis-à-vis soft power represents a unique model and therefore a promising break from the traditional mold of conducting foreign policy in Africa by more traditional East/West partners such as China and the US (Camacho, 2016).

Lack of baggage

Turkey's Ottoman past and Muslim identity have been raised as major variables driving Turkey's engagement with Somalia. To the contrary, I argue that it is Turkey's distinct lack of politico-historical baggage – particularly its lack of an imperial/colonial past – in eastern Africa that partially explains Turkey's rapid successes in the region, from Somalia to Ethiopia to Kenya. On the economic front, Turkey generally eschews something many Africans resent: free market capitalist baggage aimed at securing the best agreement, regardless of cost (Özkan, 2008).

Coordinated and unilateral approach

A recurring theme in relation to Turkey's presence in Somalia is the need for coordination of its efforts with other international and regional actors (International Crisis Group, 2012). According to this logic, coordination and cooperation are the only means of ensuring Turkey's overall and continued success in Somalia. My analysis of the situation in Somalia leads to the opposite conclusion. That is, Turkey's success in Somalia is precisely because it has chosen to act in a unilateral and highly coordinated fashion. Indeed, it is precisely because the international community is at cross-purposes in Somalia that so much money has been wasted on policies that counteract one another (Hearn, & Zimmerman, 2014; Farah, & Handa, 2016). The multiplicity of actors lacking a coherent vision or the veneer of coordination has arguably done more damage to Somalia than anything else. As Özkan (2014, p. 50) states:

While Turkey's interest in Somalia has brought it into international

spotlight, the interest that has been shown by the international community has been nothing more than 'pseudo acts of kindness' towards Somalia. To this day, the international community has been reluctant to solve any of Somalia's long-standing problems.

It is a testament to the disjointed, competing, and ultimately ineffective nature of the work done by hundreds of stakeholders in Somalia over the past quarter of a century that Turkey has found fertile ground for its development projects, business interests, educational endeavours, and military agreements. Indeed, though I argue that Turkey's reasons for engaging with Somalia ultimately rest on burnishing its image by raising its international prestige and making money, Turkey's activity is largely welcome precisely because it is effective in areas where so many others fail (Cannon, 2016a, p. 100). It can be argued that the current unilateral nature of its engagement in Somalia is precisely the reason for Turkey's relative gains vis-à-vis other stakeholders. It also rests on the coordination of Turkish efforts. It also rests on the coordination of Turkish efforts. These involve not only the Turkish Foreign Ministry, the Turkish Health Ministry, the Religious Affairs Directorate, the Turkish Red Crescent, and other government entities, but NGOs such as the Humanitarian Relief Foundation (İnsani Yardım Vakfı/İHH). Smaller groups like Dost Eller (Friendly Hands), which offers civil society assistance also operate in Somalia. The efforts and actions of these stakeholders are coordinated from Ankara by the Turkish Cooperation and Coordination Agency (TİKA) (Bingöl, 2013; Özkan, 2014, p. 35-46).

Turkey may justifiably be criticised for some of the ways it prosecutes business in Somalia ("İçi para dolu", 2014). However, I argue that Turkey is only doing what other regional and international actors have been doing in Somalia for decades. The key difference is that Turkey, unlike other external actors, has attempted to assuage Somalia's current problems on the social, economic, and political fronts. It has shown less interest in an attempt to craft expensive, long-term solutions that are short on detail and involve the usual suspects of foreign-funded civil society organisations, NGOs, and consultancies. These result in conferences and policy papers but rarely offer anything concrete such as medical facilities or roads. Because of its efforts, Turkey is now viewed as a peacemaker in Africa and, to some,

as a saviour to Somalia (Gullo, 2012). Turkey is also considered by many as an honest broker in the Horn of Africa. Turkey and Turkish businesses are regarded favourably, at least by Somali stakeholders who engineered Turkey's control of the airport and port. Furthermore, Turkey is close enough geographically to be considered a friendly power by Somalis but far enough away to remain aloof in a way that the Arab states, Ethiopians, and Kenyans cannot.

Given the current climate of corruption, the competing goals of regional and international players, and the inability of the government to broadcast its power beyond portions of Mogadishu, it is politically and economically savvy for Turkey to act in a unilateral, highly coordinated fashion and carve out its own sphere of influence in Somalia and the wider region. By exploiting the status quo in Somalia, Turkey has helped itself as well as Somalia in some visible cases.

TURKEY AND KENYA

The case of Kenya differs from that of Somalia in a number of ways. First, Kenya is not considered a failed state. Indeed, Kenya is viewed as a robust African state and one that offers a strategic gateway to East Africa given the importance of its port, roads, and rail networks as well as its economic clout. Second, Kenya attracts a variety of economic and political actors and has been firmly in the West's camp since independence. Third, Kenya has reciprocated Turkey's charm offensive on the political and economic levels. The contrast with Somalia is indeed stark, given its history of instability and inability to broadcast power effectively throughout the entire state. Fourth, though Kenya presents unique opportunities and challenges vis-à-vis Turkey, nowhere near the appetite for risk is needed to invest political and economic capital in Kenya when compared with elsewhere in East Africa and the Horn. Correspondingly, less risk also may mean less visibility and lower returns. For example, no one outside Nairobi and Ankara discusses Turkey's pivotal role in Kenya the way they do in Somalia.

A combination of domestic and international factors as well as leadership in both countries undergird increasing Turkish-Kenyan relations (Cannon, 2016b). Indeed, the relationship is best explained through an analysis of

the foreign policies of both countries and, in particular, a combination of international factors and domestic constraints rather than systemic variables, as dominant realist orthodoxy claims (Waltz, 2010). It is submitted that domestic factors including economic, demographic, leadership and geo-politics provide a better rationale for Turkey's budding relationship with Kenya, and vice-versa, than the pure struggle for power in an international system characterised by anarchy and autarky (Snyder, 2002). International relations cannot be de-linked from domestic politics (Bueno de Mesquita & Smith, 2012), and the two always work in tandem in shaping foreign policy (Adnan, 2014). The most compelling explanations for Kenya's relationship with Turkey therefore lie somewhere at the intersection of international relations and comparative politics – and this study draws upon that literature in elucidating that partnership. These factors help explain Turkey's spearheading of a diplomatic, economic and strategic charm offensive that dovetailed with Kenya's search for alternative geo-strategic and trade partners.

I argue that this relationship is driven, on the one hand, by the desire of the leadership in both countries to develop their economies through a search for international markets and development partners and to enhance domestic security and, on the other, to gain international clout and secure international partners outside the traditional East/West paradigm. As economic powerhouses in their respective regions, Kenya and Turkey potentially have much to offer one another – if they manage their nascent relationship well.

As discussed and analysed below, opportunities exist for both to combine their respective, comparative economic and strategic advantages in order to improve their economies and security and expand their diplomatic reach. First, I explore domestic factors; second, international factors; and third, risks, constraints and opportunities.

Domestic factors

Turkey's foray into Kenya and East Africa is indicative of the Erdoğan government's approach to foreign relations in general. That is, foreign relations and outreach are highly personal, often including state visits by Erdoğan himself, as well as the closely coordinated involvement of

a whole suite of Turkish institutions, to include government agencies, NGOs, and businesses (Görener & Ucal, 2011). This has dovetailed nicely with Kenya's own interest in locating new alliances and alternative partners, and Kenya has responded positively to Turkey's overtures under the leadership of both President Kibaki and President Kenyatta, attempting to establish or rejuvenate business ties with non-traditional partners and to attract investment to Kenya from countries like Turkey. Both Kenyatta and Kibaki have also demonstrated a keen interest in finding non-traditional outlets for Kenya's exports (Ochami, 2008). Turkey is correspondingly searching for new markets for its products and has developed a strategy of engaging key countries in Africa along these lines. In this, as in Somalia, I argue that a critical group of supporters of the AKP, the so-called Anatolian Tigers, have played a critical role (Korkut & Civelekoğlu, 2012). Denied for many years of viable opportunity spaces in Turkey, their appetite for risks – first in Central Asia, then Iraq, and now Somalia and East Africa – is supported not only by the AKP but by their own experiences and understanding of working in difficult environments.

International factors

In recent years, Turkey has emerged as an alternative strategic and development partner for Kenya, offering a fresh approach with arguably fewer strings attached than countries such as China and the US. Turkey's interest in Africa is informed by its interest in flexing its political and diplomatic muscles on the world stage commensurate with its new-found confidence and wealth (Harte, 2012). To this end, Turkey views Kenya as a unique and strategic launching pad for the expansion of its strategic interests in the Horn of Africa, East Africa, and beyond. As President Erdoğan noted in 2012, "We have chosen Kenya to be the natural hub and launch pad for our [Turkish] operations due to the country's physical and trade connectivity" (Ngigi, 2012).

In the arena of development, Turkey's focus in Africa on smaller-scale, lower profile development projects such as agriculture offers an alternative to mammoth infrastructure projects grabbed up by more traditional partners from the East or West. This approach is generally welcome and potentially will have a greater effect on the lives of ordinary Africans, to include Kenyans (Daly, 2008). Furthermore, as in the case of Somalia,

Turkey also tends to take a highly coordinated approach in development as well as trade and diplomacy. These efforts are largely coordinated by the Turkish Cooperation and Coordination Agency (TİKA).

Risks, constraints, and opportunities

Both countries will need to gain a greater understanding of one another and address certain constraints and risks in order to capitalise on a mutually beneficial and long-term relationship, to include compromising in areas such as tariffs and export quotas. In the area of trade, Turkey and Kenya need to do more to foment bilateral trade flows. Second, they must manage the current trade deficits between the two countries. Lastly, perceptions of Africa and expectations of Africans in Turkey need to be managed, better understood, and improved. This is also true of Turkey and Africa as a whole.

Trade

The current balance of trade favours Turkey, and Kenyan businesses face barriers to entering the Turkish market. These include taxation and demand. Turkish products are often in high demand in Kenya, particularly manufactured goods. The same cannot be said for Kenyans investing in Turkey. This is because many of the items Kenya plans to export are readily available in Turkey, to include fruit, produce, flowers, and tea. In this respect, Kenya hopes to meet an increasing demand both inside Turkey and in Turkey's near abroad for produce and items that Turkey cannot meet given its current capacity (Mbogo, 2012). To assist Kenya and other African states, Turkey could act proactively in two areas: one, it could lower its import taxes to facilitate the direct export of Kenyan goods; and two, it could allow Kenya to utilise the direct Turkish Airlines flights for its exports and as an alternative trade hub. This would allow Kenya to avoid double taxation, as it currently exports goods to Turkey via European hubs, so it is taxed twice. This is a net positive for Turkey as well, as it would further cement Istanbul's place as a global entrepôt.

Tariffs and trade barriers

On these important fronts, Turkey has taken two proactive steps. First, Turkey made changes to both its applied 'most favoured nation' and preferential tariffs that cumulatively affect nearly nine percent of

manufacturing imports and 10 percent of import product lines. Second, Turkey's cumulative application of temporary trade barrier (TTB) policies – antidumping, safeguards, and countervailing duties – is estimated to have impacted an additional four percent of imports and six percent of product lines (Bown, 2014). These changes were made at the same time that Erdoğan's government was aggressively pursuing new markets for Turkish exports in places like Kenya, Nigeria, South Africa, and Ethiopia. Additionally, other promising areas of cooperation and mutual benefit in Kenya and Turkey as well as potentially in other East African states include oil and mining, manufacturing, renewable energy (Kavaz, 2015), agriculture, and security and counterterrorism (Cannon, 2016b, p. 63).

Managing perceptions and expectations

Turkey is increasingly seen as a viable and even desired partner in Africa. Its successes in Somalia, in particular, have resonated well inside and outside of Africa. Yet these successes risk being erased if a greater understanding of Africa and Africans is not soon in the offing in Turkey. As Özkan presciently noted, "Domestically [in Turkey], the biggest challenge is the lack of understanding of Africa in both policy circles and academia, which remains the case despite more than a decade of engagement with the continent. There continues to be a shortage of African affairs experts in Turkish think tanks and academia" (Özkan, 2016). Offering graduate studies programmes at major universities in Turkey to qualified African students from across the continent and encouraging Turks to study and perform research on Africa may eventually alleviate this deficit. However, negotiating the minefields of African civil society, politicians, and patrimonial, neo-colonial governance throughout much of the continent is fraught with risk. Indeed, I argue that it is not enough for Turks to 'listen' to Africans. Rather, an in-depth understanding of particular regions or polities is needed that can substantively discriminate between false and real needs as well as seizing business opportunities that benefit both Turks and Africans.

CONCLUSION

Turkey's unilateral, highly coordinated approach in both Kenya and Somalia is not only welcome but likely holds one of the keys to Turkey's current and future success on the continent. I argue that lessons learned in Kenya

and Somalia potentially hold true for much of East Africa, in particular Tanzania, Uganda, and South Sudan. This is not to say that Turkey should discontinue its multilateral work on diplomatic and humanitarian fronts with other states and non-government actors to alleviate hunger or broker solutions to conflicts. Rather, coupled with these actions and in practice, Turkey should be willing to take risks and operate independently, doing what is good for Turkey and, correspondingly, tailoring its policies to address the needs and desires of African leaders and their polities as based on mutually-constitutive engagement as well as reactive and proactive measures taken by Africans such as President Kenyatta. Rather than sandwiching Turkey's policies and actions within larger, more international development or structural adjustment goals that so often founder because of corruption and the competing (if unspoken) interests of other actors, Turkey should substantively engage Africa and African polities based on mutual interests. In other words, by not tying its Somalia actions and policies to AMISOM, US, UN, EU, or GCC goals, Turkey has been able to achieve major successes and cement its status as a rising power on the diplomatic and international fronts. It has done so because it has acted nimbly, with great coordination from Ankara, and without the constraints that come with false alliances and competing agendas.

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A Critical Approach to the Corporate Insolvency in Romania

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Abstract

A critical moment in the existence of an economic entity is the deterioration of its financial situation and the advent of a liquidity crisis that could lead to the establishment of debt payment incapacity. Through this paper, we analyse the financial situation of companies before the moment of entry into insolvency and during insolvency proceedings, and then we compare them with non-distressed companies. Our purpose is to debate the problem of the prediction of insolvency in terms of symptoms and methods of assessment of the risk of insolvency, taking into account a sample of companies from Romania that are listed on the Bucharest Stock Exchange Market. In order to reveal the most significant indicators that describe the distressed companies, we conducted a comparative analysis of some existing models to measure the bankruptcy riskm with a focus on testing their applicability and developing a new model appropriate for the Romanian business environment.

Keywords: *Insolvency, Insolvency Risk, Financial Information, Bankruptcy Prediction Models, Artificial Neural Networks, Romania.*

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INTRODUCTION

While companies are functioning, there could arise some difficulties or financial problems that affect their normal activity, putting their going concern in danger. Gradually these kind of problems may become bigger, taking on the form of insolvency. Even so, usually there are some suspicions and signals that indicate increased financial risks. A timely awareness of these aspects could be helpful in managing distress situations.

Intensely studied over time, the problem of insolvency and bankruptcy represents permanently a key issue for managers, stakeholders in general, and academics. As the business environment changes and faces new dimensions, these new dimensions could define the risk of insolvency as well. Furthermore, geographically thinking, factors like economic systems, financing opportunities, fiscal policies, labour conditions, markets, legislation, or national cultures can individualise businesses development. Thus, companies' activities and risks require proper study.

In this paper, the applicability of the models proposed by Altman (1968), Anghel (2002), and Robu and Mironiuc (2012) will be tested in order to detect the most representative actual symptoms of insolvency applicable to Romanian companies listed on the Bucharest Stock Exchange Market. At the end of the article, we offer useful suggestions for the everyday management of companies that are facing insolvency risk and for all parties interested in a better understanding of this topic.

CORPORATE INSOLVENCY: GENERAL ASPECTS

Changes in the global economy, changes in the national economic and business environment, new legislative approaches, and different types of companies with specific features reveal the need for reconsidering the theories and largely debated indicators of measuring the corporate insolvency risk.

Theoretical background: Theories supporting working hypotheses

Altman is one of the most representative authors who dedicated his studies to the insolvency issue. Starting in 1968 with an original z-score model, he proved in his studies the value of financial and non-financial information in

the prediction of insolvency. He developed multiple discriminant prediction models for listed companies and for small and medium-sized enterprises, for which financial information is very limited (Altman, Sabato, & Wilson, 2010). This latter study was focused on UK companies and showed that non-financial and compliance information can significantly contribute to measuring the risk of insolvency in small entities. Furthermore, the results showed that the principal reasons that may explain the unexpected difficulties of companies are their insufficient capitalisation and lack of planning.

Other opinions emphasise the value of qualitative information for predicting bankruptcy. An empirical study on Canadian bankrupt companies, conducted by Fisher and Martel (2000) focuses on testing some theoretical models regarding the factors that influence the bankruptcy decision of a company by looking at the ways conflicts with creditors are managed the as well as on on reorganisation initiatives. It reveals that the structure of assets, their volume, the type of company, its ownership, and the maturity of liabilities, as well as the legal forms of the entities, affect the state of the distressed companies and the success of their reorganisation attempts.

Al-Kassar and Soileau (2014) affirmed that numerous statistical failure prediction models described in the literature were not tested in order to prove whether such methodologies work in practice. Their research demonstrates that both financial and non-financial information in the evaluation of insolvency risk is necessary.

Šarlija and Jeger (2011) stated that macroeconomic conditions as well as market dynamics have changed over the period of their study. Financial ratios that were less important in one period became more important in the next period. According to them, in complex business conditions, mathematical and statistical models have become a necessity, but despite the fact that many studies reported high predictive power for their ratios, a unique perfect combination of financial ratios has not been found. Furthermore, financial distress prediction models lose their predictive power over time.

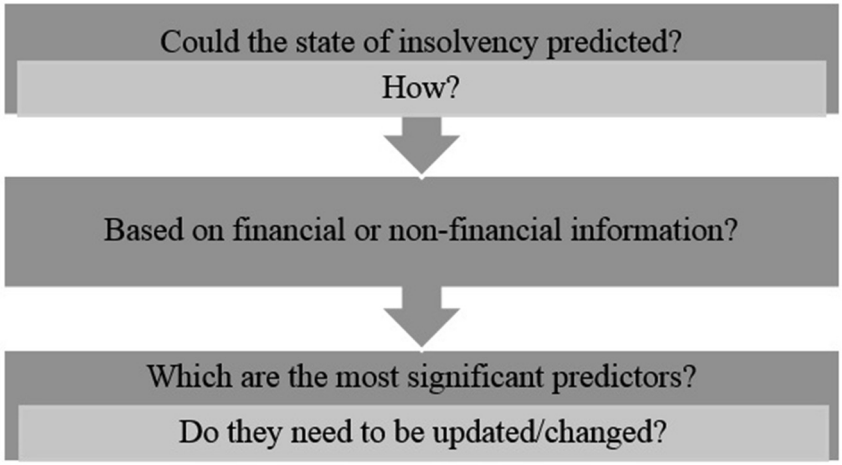
The performance of bankruptcy prediction models in the recent financial

crisis context was tested by a study of Cimpoeru (2014), in which it was applied to Romanian companies. It compared classic score models such as those used by Altman and Taffler and logistic regression methods. The results were in line with the literature; in a financial crisis context, classical models have to be reestimated and financial ratios reconsidered (Cimpoeru, 2014).

Robu, Balan and Jaba (2012) estimated the going concern ability of Romanian companies to continue their activity within a predictable time horizon, without becoming insolvent or bankrupt. According to this study, the activity field (e.g., industry, commerce, services) and the level of structural ratios of the balance assets and liabilities (normal/high) were distinguished as determinant factors of influence on the survival time of the companies.

In general, all these studies present the problem of insolvency starting from the following research questions, as can be seen from Figure 1.

Figure 1. *Approaches of the problem of insolvency existing in literature*



Source: Author's processing

Existing studies of the insolvency problem launched and emphasised the question of the predictability of state of insolvency by valuation of financial and non-financial data. Opinions are diverse, and a complete and stable model has not been validated through a time test. Under these circumstances, we proposed to reanalyse the subject from the perspective of today's business environment, according to the following working hypotheses:

- *H1:* Corporate insolvency can be predicted and described by specific indicators, especially by certain financial ratios.

- *H2:* The significance of insolvency risk predictors can be influenced by the analysed period.

Methods and models of measuring the insolvency risk

Different statistical methods were used for developing predictive models of bankruptcy. These were refined during time and retested in order to prove their compliance to the changes of the business environment. Regression analysis, score models and discriminant analysis, logistic regression, artificial neural networks, expert systems, and other methods were applied in studies such as those by Altman (1968), Altman, Sabato, and Wilson (2010), Al-Kassar and Soileau (2014), Chung, Tan, and Holdsworth (2008), Fisher and Martel (2000), Hamdi (2012), Laitinen, Lukason, and Suvas (2014), Ramayah (2010), and Wilson (2014).

In addition, Romanian authors such as Anghel (2002), Bircea (2012), Robu and Mironiuc (2012), Cimpoeru (2014), and others conducted studies focusing on the financial problems of Romanian companies.

As insolvency may have multiple causes, the questions that arise are which information could best describe this state of crisis and what is its value relevance? Financial ratios offer the advantage of a numerical measurement of the state of companies' financial position and performance, assessing the efficiency of the activity, indebtedness, liquidity, solvency, and profitability, as well as making a distinction between current operating activity, investments initiatives, and financial activities. On the other hand, these are considered historical data with questionable accuracy and

predictive power. However, additional details could be useful in assessing the status of enterprises (for example, corporate governance-related factors; *the* size, type and age of enterprises; features of the activity field and industry prospects; intellectual capital indicators; macroeconomic indicators; management style; etc.). A hybrid model could be expected to achieve a more accurate prediction of corporate financial distress (Lin, Liang, & Chu, 2010).

AN ANALYSIS OF THE INSOLVENCY OF ROMANIAN COMPANIES LISTED ON THE BUCHAREST STOCK EXCHANGE

In order to validate the mentioned hypotheses, firstly, we focused on performing an empirical study that includes a comparative analysis of three exiting statistical models of bankruptcy prediction. Seconldy, we proposed a new approach relevant in evaluating the insolvency risk, with the purpose of confirming the results and indicating the most representative symptoms of the financial difficulties that Romanians companies face.

Test of models in Altman (1968), Anghel (2002), and Robu and Mironiuc (2012)

Chung, Tan, andHoldsworth (2008) indicate that the models might not specifically tell the managers what is wrong, but they may be useful instruments in problem identification. We subscribe to this opinion, and in order to verify the applicability of some existing models of bankruptcy prediction, we conducted an empirical study on 12 Romanian entities listed on the Bucharest Stock Exchange. Seven of them had entered into insolvency proceedings, and five of them were without insolvency-related antecedents. The companires were operating in the metallurgical and electrical industries, agriculture, construction, and transportation services. In total, we assessed 93 financial statements over the period of 2004 to 2013, covering nine to ten years of assessmnet for distressed enterprises and five years of assessment for non-distressed enterprises.

The selected models for this test are the initial Altman model, recognised as a reference model in the literature, and two score models developed for Romanian enterprises by the Romanian authors Anghel and Robu and Mironiuc. Those models were developed in different periods, but their analysis helps us to prove if their accuracy can be trusted over time. By this

test of applicability and accuracy, we prove if they can still be applicable to Romanian companies listed on the Bucharest Stock Exchange.

The Altman model was developed for manufacturing companies from the US with a distinct economic and reporting profile. The Romanian models were built during periods with different reporting norms and intense political and economic changes.

As can be remarked from the equation of the models, there are few representative financial indicators that significantly contribute to the score results. These are total assets turnover, determined by dividing the annual sales to total assets of the company (representative in the Altman model); net profit ratio in total income, the proportion of cash-flow in total assets, and debt ratio (representative in the Anghel model); and return on assets ratio (according to the Robu and Mironiuc model).

According to the Altman model, an assessment of the predictive power of these models in the years before the distressed companies entered into insolvency proceedings indicates that all cases are considered as facing high bankruptcy risk. The decreasing trend of the Z-scores for companies in insolvency proves the intensification of the state of the crisis, but the application of this model in today's Romanian business environment is questionable.

Table 2. *Accuracy of the tested models during the period of 2004 to 2013*

		Model		
Period	**Cases**	**Altman**	**Anghel**	**Robu & Mironiuc**
N-10	2	100%	50%	50%
N-9	4	100%	25%	0%
N-8	6	100%	67%	0%
N-7	6	100%	67%	0%
N-6	6	100%	67%	17%
N-5	6	100%	83%	17%
N-4	7	100%	86%	14%
N-3	8	100%	75%	25%
N-2	8	100%	75%	25%

N-1	7	100%	100%	71%
N	5	100%	100%	40%
N+1	3	100%	100%	100%
Total	68	100%	76%	26%
N - year of the company's entry into insolvency proceedings				

Source: Author's processing

As seen in Table 2, he same status of high insolvency risk was obtained by all three models in 22 percent of the cases. High insolvency risk was evaluated simultaneously by the Anghel and Robu and Mironiuc models in 48 percent of the cases, with the remark that the Anghel model is more restrictive, predicting a more increased risk two to three years in advance of Robu and Mironiuc model. At the same time, for enterprises without financial difficulties, the Robu and Mironiuc model showed more restrictive results than the Anghel model in eight percent of the cases.

In general, the overall results of the conducted tests reveal that the evaluation models have predictive power. In the years before the instauration of insolvency, they identify the high risk level, but as long as their results are different and their accuracy differs, the need of updates should not be neglected.

Selection of variables

The previous analysis revealed that there are some significant ratios that influence the results of the models. Considering them as a reference point for continuing our study and taking into account the overall structure of the financial accounts of the companies, we selected the financial ratios presented in Table 3 as the main relevant indicators for insolvency risk detection.

Table 3. *Financial ratios suggested for statistical analysis*

Ratios	Calculus formula	Meaning
Debt ratio	Total liabilities/Total assets	Degree of indebtedness
Return on assets	Net result/Total assets	Return on activity/Profitability
Total assets turnover	Sales/Total assets	Efficiency of the activity
Quick ratio	(Current asset Inventory)/ Current liabilities	Assessment of liquidity

Source: Author's processing

This combination of financial ratios is expected to be appropriate for a complex evaluation of the insolvency risk because it addresses the level of liquidity and indebtedness as well as the performance and efficiency of the activity. As a pre-test of the value relevance of these ratios, we compared their range of values and their mean values for the same sample of companies as in the previous test of the Altman (1968), Anghel (2002), and Robu and Mironiuc (2012) models. The results of this analysis are systematised in Table 4.

Table 4. *Pre-test of the financial ratios suggested for statistical analysis*

	Non-distressed companies				**Insolvent companies**			
Ratios	Range		Trend	Mean	Range		Trend	Mean
Debt ratio	0,12	1,21	slowly up	0,43	0,15	2,90	Up	0,75
Return on assets	-0,18	0,10	slowly down	-0,01	-0,34	0,13	down	-0,05
Assets turnover	0,26	1,51	slowly down	0,76	0,02	1,72	down	0,80
Quick ratio	0,33	4,25	down	1,15	0,07	4,47	down	0,79

Source: Author's processing

First, it is evident that the indebtedness of insolvent companies is very high. This seems to be the result of the accumulated liabilities over time. Even though the same tendency of increasing debt ratio is noticed among non-distressed companies, the range and mean values are considerably different. For the non-distressed companies, in general, the total liabilities represent around 43 percen the total assets, while for insolvent companies their level grows up to 75 percent. In terms of profitability, it seems that these Romanian companies are facing problems in valuing their products

and services, as they are registering net losses during the analysed period. Nevertheless, the losses are more accentuate among insolvent enterprises. The same slight differences were registered for assets turnover ratio, showing a possible destabilisation of the market demand or a high level of improperly used assets. Coming to quick ratio comparison, even though the trend has the same tendency, the mean values highlight the lack of liquidity among insolvent firms.

Looking at the previous results, we could be tempted to eliminate the return on assets ratio and the assets turnover ratio from further empirical study. However, the evidence from the comparison of the Altman (1968), Anghel (2002), and Robu and Mironiuc (2012) models as well as the results of a previously conducted study (Mironiuc & Taran, 2015) and the principles of the Du-Pont system of ratio analysis (Gitman & Zutter, 2011) sustain the relevance of these ratios. Furthermore, behind the state of the liquidity crisis, the most expected causes are the performance and efficiency of the activity disruptions. Thus, we consider it appropriate to include all of the four selected financial indicators in the further empirical study.

Method of analysis

As we have seen from the literature review, plenty of methods have been used in insolvency and bankruptcy studies, each of them having its own particularities. Without restrictive assumptions, the artificial neural networks method is appropriate for evaluating the importance of financial indicators that describe different groups of entities.

Zhang, Hu, Patuwo, and Indro (1999) studied the role of artificial neural networks in bankruptcy prediction and concluded that neural networks are significantly more accurate methods of prediction of bankruptcy than logistic regression models, due to the former's nonlinear nonparametric adaptive-learning properties. Huang, Chiu, and Wang (2012) have the same opinion. They affirmed that artificial neural networks analysis is able to predict the possibility of financial distress two to three years in advance. However, their study proves that neural networks analysis is not appropriate for all information, and this fact could be understandable because the method imitates the operating mode of the human brain and is therefore able to learn and to generalise from experience (Hamdi, 2012).

As a complementary source of evidence, we will focus as well on the descriptive statistics of the analysed sample.

Description of data

The further analysis is realised on a sample of 25 Romanian companies listed on the Bucharest Stock Exchange. The sample is composed of:

- 10 companies not facing financial problems and without any records in the official reports of insolvency proceedings analysed for the 2009-2013 period;
- 7 entities listed on the secondary market of the Bucharest Stock Exchange and registered officially as being in insolvency proceedings for the 2004-2012 or 2004-2013 periods;
- 8 companies listed on the principal market of Bucharest Stock Exchange, suspended from trading and having entered into insolvency proceedings, analysed for the 2009-2013 period.

The collected data are from the Bucharest Stock Exchange official website or directly from the financial statements of the companies as published on their official websites.

Results of the empirical study

Our empirical study of the indicators of insolvency for Romanian companies was realised using the SPSS statistics software, version 20. At the beginning, we prepared the comparative descriptive statistics analysis, consisting in presenting the extreme values of the subgroups of the sample, as well as mean values and standard deviation, as can be seen in Table 5.

Table 5. *Descriptive statistics of the groups of companies*

Ratios	Non-distressed companies				Insolvent companies			
	Range		Mean	Standard deviation	Range		Mean	Standard deviation
Debt ratio	0,02	1,15	0,42	0,30	0,00	3,44	0,78	0,56
Return on assets	-0,20	0,10	-0,01	0,07	-0,69	0,13	-0,08	0,13
Asset turnover	0,07	2,07	0,81	0,44	0,02	2,89	0,70	0,52
Quick ratio	0,17	5,23	1,14	1,02	0,02	8,01	0,94	1,09
Ratios	**Before entering into insolvency**				**During insolvency proceedings**			
	Range		Mean	Standard deviation	Range		Mean	Standard deviation
Debt ratio	0,00	2,90	0,71	0,45	0,10	3,44	1,02	0,80
Return on assets	-0,33	0,08	-0,06	0,10	-0,69	0,13	-0,14	0,20
Asset turnover	0,03	2,89	0,80	0,54	0,02	1,21	0,36	0,25
Quick ratio	0,03	8,01	0,94	1,08	0,02	5,42	0,96	1,14

Source: Author's processing

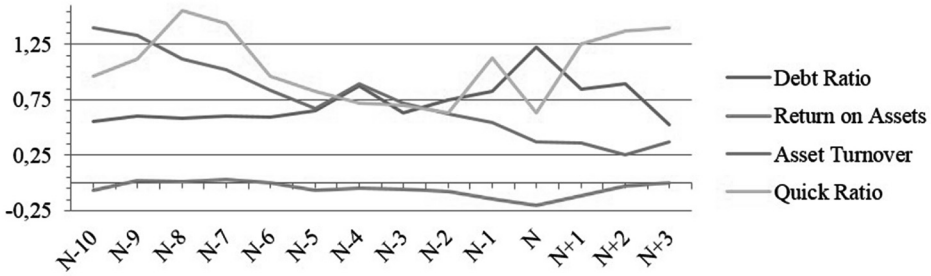
Our first classification was the general one, between companies without financial difficulties and insolvent companies. At this level of analysis, the group of insolvent companies was formed by the financial results of the companies that had entered into insolvency, including a few years before, during and even after the insolvency proceedings period. This explains the fact that the range of values of selected ratios for insolvent companies is partially overlapping the range of values for non-distressed companies. The mean values of the ratios are significantly different, showing a high level of indebtedness among insolvent firms; a higher negative mean value of the return of assets ratio –indicating net losses and a smaller level of assets turnover explained most likely by a decrease of the turnover; and a quick ratio indicating the lack of liquidity of the current assets, except inventories, in order to pay the current liabilities of insolvent firms.

Looking at the level of indicators before entering into insolvency proceedings in comparison with the beginning of the insolvency proceedings period, it is relevant to highlight the considerable increase of indebtedness among the insolvent firms, as well the increase of their losses and the decrease of efficiency of their assets usage. In terms of liquidity, the mean values

of the quick ratio are almost similar, showing a slight increase during the insolvency proceedings period and, actually, the first proof of trial to solve the financial problems of those entities.

One of the presumptions of our study was that the state of insolvency could be foreseen based on a staged deterioration of the financial position and performance of enterprises. Figure 2 presents the mean values of the debt ratio, the return on assets ratio, the assets turnover ratios, and the quick ratio for the insolvent companies from our sample, covering the period from 10 years before entering into insolvency proceedings and until the fourth year of proceedings.

Figure 2. *Mean values of the analysed ratios for the insolvent companies, before and during the insolvency proceedings*



Source: Author's calculations

As shown in Figure 2, the year N (meaning the year of official entry into insolvency proceedings) is a breakpoint for the analysed ratios, showing the highest medium level of indebtedness, the highest lack of liquidity, and the biggest losses. In terms of assets turnover, the year of entering into insolvency registered a considerable inefficiency of the usage of assets, which stayed stable during the first year of insolvency and decreased again in the second year before increasing at the level of the year N in the next period. Generally, this analysis shows that the state of crisis did not come on suddenly and that all ratios were affected over time. In the last five years before insolvency, variations of the indicators seem to explain a trial of the companies to face the arisen financial difficulties, but the overall trends show the destabilisation of their financial position and performance. The

encouraging evidence is the fact that during the insolvency proceedings period, the situation of the firms became more favourable and the level of the debt ratio, the return on assets, and the quick ratio became similar to that from eight to nine years before the onset of the insolvency problem. Years three and four after the moment of entry into insolvency proceedings represent in fact the moment of exit from the proceedings, in the case that the recovery programme was successfully accomplished.

Our study continued with the Multilayer perceptron option of the artificial neural networks method, revealing the importance of those ratios in each one of the three classifications that we did. Its results are presented in Table 6.

Table 6. *Normalised importance of the selected variables*

Ratios	2 groups	3 groups	Yearly groups
Debt ratio	100,00%	100,00%	80,30%
Return on assets	25,80%	35,80%	100,00%
Assets turnover	44,10%	77,90%	91,10%
Quick ratio	29,10%	14,80%	14,80%

Source: Author's processing

In the first discriminating test between healthy and insolvent firms, the debt ratio was considered the most representative indicator of the imminent financial problems, being followed by the assets turnover ratio and the other ratios, which registered a significantly lower percentage of importance. From the classification among non-distressed and insolvent companies both before and during the insolvency proceedings periods, the debt ratio registered again the absolute percentage of importance. The assets turnover ratio also registered at a considerable level of importance, showing that efficiency of the activity is the second indicator of insolvency, which presents a significant deterioration during time. When trying to make a distinction only among insolvent companies in order to highlight their yearly performance during the analysed period, the most important indicator was the return on assets ratio, explaining that in the short-term, the profitability is that which reflects the potential problems of the

companies, being as it is a sensitive indicator of the overall performance. The efficiency of activity seems to be very important as well for comparing the results on a yearly basis, explaining also the quick destabilisation of companies caused by problems with their sales. The level of indebtedness is important also, but it is more stable liabilities especially long-term ones being accumulated over time. The quick ratio does not make a significant distinction, which means that it may represent a potential and temporary problem for all companies during each moment of their business cycles.

The level of confidence in these results might be affected by the accuracy of the built models. According to the artificial neural networks analysis methodology, the training step is more important and requires more cases for analysing and building the classification algorithm. The accuracy of this step was also higher for our cases, as can be seen from Table 7. For the distinction between healthy firms and insolvent ones, it obtained the highest level of confidence 80.6 percent during the training step and 80 percent during testing. The chances of misclassification were higher in the case of discriminating among non-insolvent companies and insolvent entities during the pre-insolvency period and insolvency period. Questionable results were registered for the yearly grouping of the insolvent firms.

Table 7. *Accuracy of the artificial neural networks classifications*

Classification	**Training**	**Testing**
2 groups	80,60%	80,00%
3 groups	71,10%	59,10%
Yearly groups	38,00%	22,90%

Source: Author's processing

These results confirm our expectations and validate the stated working hypotheses of our study. There are financial ratios that make a considerable distinction in measurement of the insolvency risk and between the categories of companies. Their importance is relative, and they can be ranked according to the stage of classification and to the analysed period. Thus, the discriminatory power of these ratios is different from 10 years before insolvency proceedings to five years before, the representative indicators of insolvency being affected since the last five years before

the entry into the state of crisis. Even the evoked crisis is, first of all, a liquidity crisis. Factors like indebtedness, profitability, and efficiency are more decisive. Based on them, the liquidity problems may be avoided, solved, postponed, or intensified.

CONCLUSION

Even though the issue of insolvency has been intensively studied, the updated and actual remarks about this problem serve as useful instruments of managerial decisions, credit risk assessment, and validation of going concern assumption, as well as the basis for further research.

Different studies were conducted and different methods were used, but their accuracy became questionable over time. By testing the Altman (1968), Anghel (2002), and Robu and Mironiuc (2012) models on a sample of Romanian companies, we noticed that their results were not similar and, in fact, Altman model is much more restrictive than the others. From here, the need for improving the studies and adapting them to the present reality is relevant evidence.

By studying the value relevance of a new combination of ratios for assessing the insolvency risk, and by discriminating between healthy and insolvent companies by conducting an artificial neural networks analysis, we observed that the indebtedness of companies which iscontinuously increasing over time is the most important factor that predicts the imminence of insolvency. In addition, the assets usage efficiency is a problem faced by insolvent andnon-distressed companies alike. Since five years before, financial ratios deterioration seems to indicate insolvency imminence. From the yearly classification of insolvent companies, the quick ratio was regarded as the most sensitive indicator with variations over time. However, it cannot be considered a relevant predictor of insolvency as long as its evidences are variable.

These results are suggestive for understanding the main issues that predict and describe the state of insolvency, even if limitations like restrictions concerning data availability or the size of the selected sample require future extensions in order to enhance its relevance.

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The Bilateral Relationship between the Dynamics of Economic Crises in Capitalism and the Role of the Financial Sector

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Abstract

This study focuses on three different approaches to the role of finance and the financial sector in economy-wide relations and in specific conditions of economic crises. First, we investigate the Minskyan framework in dealing with the roots and the reasons of financial crises. Second, we look at Crooty's research on financial relations in order to understand the role of money, credit, and financial intermediation in Marx's crisis theory. Third, we summarise the position of Schumpeter in this debate and his two basic approaches which are the increase in the rate of total output and the term 'creative destruction' in order to analyse the dynamics of capitalist crises.

Keywords: *Capitalism, Financial Crisis, Financial Intermediation, Financial Sector, Money.*

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INTRODUCTION

Economic crises are inherent to the capitalist system. Although the major fact behind the crises is the motive for the maximisation of profits, the paths that lead to crises differ in the context of the structural basis of the capitalist system. Therefore, different schools of thought have proposed different theories in order to analyse the roots of crises depending on their theoretical and analytical frameworks. While some of these theories depend on the dynamics of the capitalist system, the others follow different paths. For instance, the former theories can be evaluated in the context of the Marxian framework, which deals with the inner dynamics of the capitalist system in the examination of the causes that lead to capitalist crises; however, the other approaches can be viewed through a more orthodox framework.

Therefore, in this paper, we do not just focus on Marxian explanations of economic crises but also on other leading schools of thought in order to understand various forms of theories dealing with the causes and reasons behind these crises. First, we begin with the ideas of Hyman Minsky and the explanations of one of his most important studies, known as the 'financial instability hypothesis' in the literature. We present the main structure of this hypothesis and then we show its pros and cons. Second, we focus on James Crotty's analyses on the centrality of money, credit, and financial intermediation in Marx's crisis theory. These analyses also set out a complementary structure so as to generate an understanding behind the Marxian perspectives. Third, we proceed with the Schumpeterian analysis and stress the insights of Schumpeter for the analysis of the causes of economic crises.

MINSKY AND THE FINANCIAL INSTABILITY HYPOTHESIS

Traditional arguments (The classical framework)

Before the analysis of the financial instability hypothesis of Minsky, we briefly present the basic characteristics of the mainstream approach in terms of the functioning of the capitalist system.

According to the mainstream approach, the economy is stable by its very nature. According to the ideas of Adam Smith (1776), there is a faith in the

invisible hand mechanism on the process of the economic system, which leads to ensuring the stability of the capitalist relations among individuals. In his analysis of the interactions and comparisons between domestic and foreign industries, Smith (1776, pp. 363-364) explains this case as follows:

By preferring the support of domestic to that of foreign industry, he intends only his own security; and by directing that industry in such a manner as its produce may be of the greatest value, he intends only his own gain; and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention. Nor is it always the worse for the society that it was no part of it. By pursuing his own interest, he frequently promotes that of the society more effectually than when he really intends to promote it.

Actually, we can argue that the classical economists were aware that the capitalist system was inherently stable but that it could deviate from its equilibrium level of output and employment (Snowden & Vane, 2005, p. 37). However, these deviations would be temporary and very short-lived. The common point behind this stability argument depended on the collective views of the classical economists, who argued that the market mechanism would solve the problems related to the transactions among individuals and "…would operate relatively quickly and efficiently to restore full employment equilibrium" (Snowden & Vane, 2005, p. 37). Even if the unexpected shocks temporarily deviated the economy from its equilibrium point, the stabilising inducements would be very powerful in the entity of the new economic paradigms relative to the destabilising inducements. Therefore, political interventions would create an impetus against the economic system so as to reach equilibrium between demand and supply.

Snowden and Vane (2005, p. 37) state that "[i]f the classical economic analysis was correct, then government intervention, in the form of activist stabilisation policies, would be neither necessary nor desirable", and they also add that "…such policies were more than likely to create greater instability".

Similar to the classical approach, orthodox economic paradigms also share

the same arguments in terms of government interventions in the economic process. Alternatively, this means that the classical and the orthodox paradigms completely believe in the optimising power of market forces. The roots of these arguments in favour of the optimising power of the market forces are mostly founded in the explanation of famous 'Say's law'.

In general, Say's law is known by a famous expression from Jean Baptiste Say (1971), which is summarised as "every supply creates its own demand" in the literature. It means that the amount of supply of any commodity in the market creates an equal amount of demand. In order to realise this equality between demand and supply, the market price of that commodity should equal any cost emerging from the production process. Additionally, the total cost of production should be equal to the total income that has evolved in the final phase of the production process. Furthermore, the total income should be consumed for no matter what kinds of commodity. In order to understand the process of these mechanisms behind the economic circumstances, we can pay attention to Say's own words from his most famous study:

It is worth while [sic] to remark, that a product is no sooner created, than it, from that instant, affords a market for other products to the full extent of its own value. When the producer has put the finishing hand to his product, he is most anxious to sell it immediately, lest its value should diminish in his hands. Nor is he less anxious to dispose of the money he may get for it; for the value of money is also perishable. But the only way of getting rid of money is in the purchase of some product or other. Thus, the mere circumstance of the creation of one product immediately opens a vent for other product. (Say, (1971), pp. 134-135)In the context of Say's arguments, the total costs of commodities will be equal to the factor incomes. Because all incomes are consumed in the market, each commodity produced will be bought by households. By following Say (1971 [1821]), the classical framework also indicates that money has no other role in the economy except that of providing exchange between different kinds of commodities.

In that sense, money is just a veil that hides real value. One of the major reasons behind the insufficiency of selling of commodities cannot depend on an insufficient amount of money in the circulation. Instead, there is no

sufficient amount of product in the market. At the end of each circulation period of goods and services, it turns back to market in order to fulfil the same role.

On the other hand, in the context of money, the classical and the orthodox paradigms explain the fluctuations of the general price level with the 'quantity theory' in different types of arguments. According to the classical approach for quantity theory, if the amount of money in circulation increases more than the amount of goods and services, the price level in turn increases; or alternatively, if the amount of goods and services in circulation increases more than the amount of money, the price level in turn decreases.

Furthermore, the classical framework assumes that full employment is the normal state of affairs. It depends on the argument that the level of real output will be independent of the quantity of money in the economy (Snowden & Vane, 2005, p. 38). The employment level and therefore the total production degree are determined in the labour market. The employment level, on the other hand, is determined by the labour demand and labour supply functions, while the production is determined by the production function.

The main assumptions behind the functioning of the employment level and the production can be described as follows (Savaş, 2007, p. 12): (i) there is a perfect competition in the labour market and the goods market; (ii) the incentive for production depends on the maximisation of profits; (iii) the labourers are homogeneous and divisible; and (iv) all other factors of production (capital and natural resources) and the production technology are fixed except the labour.

Therefore, classical framework reaches the following results (Savaş, 2007, p. 13): (i) every individual can find jobs at the current wage level in the labour market in other words, the aggregate economy is at a full employment level, and there is no involuntary unemployment; and (ii) in case of the flexibility of monetary wages and the general price level, the economy has automatically attained the level of full employment.

All in all, the arguments towards the traditional classical approach and its fellows can be summarised as follows, in addition to above factors:

[First], all economic agents (firms and households) are rational and aim to maximize their profits or utility; furthermore, they do not suffer from money illusion… [Second], all markets are perfectly competitive, so that agents decide how much to buy and sell on the basis of a given set of prices which are perfectly flexible… [Third], all agents have perfect knowledge of market conditions and prices before engaging in trade… [Fourth], trade only takes place when market-clearing prices have been established in all markets, this being ensured by a fictional Walrasian auctioneer whose presence prevents false trading… [Fifth], agents have stable expectations (Snowden & Vane, 2005, p. 38)

The financial instability hypothesis

Unlike the traditional classical approach, Minsky focuses on cyclical fluctuations and economic instability as causes of a natural and an integrated part of behaviours of individual interests in complex economies (Ferri & Minsky, 1991, p. 4). Ferri and Minsky (1991) state the following:

…the observed behavior of the economy is not the result of market mechanisms in isolation but is due to a combination of market behavior and the ability of institutions, conventions and policy interventions to contain and dominate the endogenous economic reactions that breed instability if left alone (pp. 4-5)

The most distinctive feature of the Minskyan approach is the constitutive power toward the analysis of the capitalist crises in the context of the financial relations in an economy. Basically, Minsky focuses on three different concepts for the examination of economic crises, which are as follows: (i) the Wall Street paradigm; (ii) financial fragility; and (iii) the financial instability hypothesis (Dymski, 1997, pp. 502-503).

First, Minsky (1977) describes the financial institutions and financial firms as units in which they provide capital assets and other sources for investment in the context of the Wall Street paradigm'. As Minsky (1977, p. 6) denotes:

Wall Street' will serve as the label for the institutions and usages that generate and allocate the finance for investment and for positions in the inherited stock of capital-assets. In our economy the behavior of 'Wall Street' is a determinant of the pace and direction of investment.

Additionally, Minsky (1977, p. 6) states that '[a] Wall Street' paradigm is a better starting point for theorising about our type of economy than the 'barter' paradigm of conventional theory".

However, Minsky (1977) does not totally refer to the term of the financial fragility for his analysis about the explanations of the problems emerging in the financial sector. According to Minsky (1977), financial fragility is a natural characteristic of the financial system, and it reveals the sensitivity behind economic crises. One of the most distinguishing arguments for the analysis of financial fragility focuses on why the economy is inherently fragile and tends towards economic crises. Minsky (1977, p. 3) observes that:

…'[f]inancial fragility' is an attribute of the financial system. In a fragile financial system continued normal functioning can be disrupted by some not unusual event…Once fragile financial structures exist the incoherent behavior characteristic of a financial crisis can develop. Incoherent behavior occurs when the reaction to a disturbance amplifies rather than dampens the initial disturbance. A financial crisis starts when some unit cannot refinance its position through normal channels and is forced to raise cash by unconventional instruments or by trying to sell out its position.

Furthermore, in light of the definitions of the Wall Street paradigm, Minsky (1977) tries to combine arguments for the Wall Street paradigm and financial fragility within his famous financial instability hypothesis. In other words, it is not easy to understand financial relations without focusing on the dynamics of that paradigm.

When we focus on his famous financial instability hypothesis, we encounter different types of arguments behind the economic problems. The common point of these arguments coincides with the specific judgment that tells us that the instability problem in an economic process is mostly caused by the

high borrowing rate if investors are led by the financial system.

In that sense, Minsky (1992, p. 6) briefly describes that the financial instability hypothesis is "…a theory of the impact of debt on system behavior and …incorporates the manner in which debt is validated". Hence, modern economic theory is typically dwells on investment increases in accordance with an increasing indebtedness and, finally, the depression phase (Minsky, 2008).

The theoretical basis of the hypothesis can be found in his leading study titled *Stabilizing an Unstable Economy* (2008). According to Minsky (2008, p. 194), the fundamental propositions of the financial instability hypothesis can be ranged as follows: "[First], capitalist market mechanisms cannot lead to a sustained, stable-price, full-employment equilibrium… [Second], serious business cycles are due to financial attributes that are essential to capitalism".

He also states:

These propositions – and thus the financial instability hypothesis – stand in sharp contrast to the neoclassical synthesis, which holds that unless disturbed from outside a decentralized market mechanism will yield a self – sustaining, stable – price, full – employment equilibrium. (2008, p. 194)

Because Minsky is from the American camp of the post-Keynesian approach, his arguments are coupled with Keynesian ideas, especially with Keynes' analyses towards the monetary side of the economy. Therefore, the Minskyan approach incorporates Keynesian assumptions about the functions of financial structure and financial relations. For instance, Minsky (1992, p. 1) states that "[a]s economic theory, the financial instability hypothesis is an interpretation of the substance of Keynes's 'General Theory'. Hence, Minsky has constructed arguments in light of Keynesian perspectives as part of an analysis of financial crises.

According to Minsky (1982, pp. 91-92, quoted in Ivanova, 2012, p. 62), the neoclassical synthesis exhibits two crucial problems: "[i] the inability to integrate money and capital assets into economic analysis, and [ii] the

resultant inability to explain financial instability".

In the Minskyan approach, there are two channels for the emergence of financial crises. These channels are the financing methods of the investment and the results of the methods of that financing. In this case, Minsky (2008) argues that the real deficiency of the Keynesian theory is the fact that the Keynesian framework ignores the financial side of the capitalist system. In other words, the theoretical case of the Keynesian framework excludes the importance of finance in the economic system.

According to Minsky (2008), an increase in financial transactions and relations are the key points from which to first explain capitalist crises in developed economies. This means that to understand the dynamics of financial crises, we should stress the reasons why the scale of financial sector has increased dramatically in the share of the aggregate economy.

Actually, for Minsky (2008), the reason depends on the structure of finance. It is the centr of the capitalist system in many fields of the economy. Each financial transaction involves the financial relations of different courses of individuals and firms. For instance, not just the financial sector but also the real side of the economy is tied to these financial relations through stocks, equities, and other financial tools. Therefore, the financial instability hypothesis of the Minskyan approach deals with these complex economic structures by focusing mainly on the financial sector in order to understand the dynamics of modern capitalist relations between households and firms.

In this sense, the problems emerging in the capitalist system are inherent to that system; therefore, there should be a continued necessity for government intervention in the Minskyan approach. As Ivanova (2012, p. 60) states, "…Minsky believed, much in line with the Keynesian tradition, that the crises arising from the permanent disequilibrium of the capitalist system can be contained by the concerted effort of 'Big Government and Big Bank'.

For this reason, Minsky (2008) stresses the requirements for the new instruments in order to deal with economic issues. He states that any economic policies should be addressed the following needs in order to

solve these problems:

[First], how the ruling market mechanism achieves coherence in particular outputs and prices… [Second], how the path of incomes, outputs, and prices is determined…

[Third], why coherence breaks down from time to time: that is, why is the economy susceptible to threats, if not the actuality, of deep depressions? (2008, pp. 111-112)

Additionally, he argues that:

…These questions need to be answered in the context of the institutions and financial usages that actually exist, not in terms of an abstract economy. It may be that what the neoclassical theory ignores, namely institutions, and in particular financial institutions, leads to the observations it cannot explain. (2008, p. 112)

Although the financial instability hypothesis has an importance in the literature, we can divide its strengths and weaknesses into two parts. On the one hand, we will focus on three points so as to show the strengths of that hypothesis. These points are as follows: (i) the arguments towards the determination of price and profits; (ii) the problems that are revealed in the realisation process of investments and the methods of financing in the case of uncertainty and risks; and (iii) the functions of the neoclassical economy in the context of the financial instability hypothesis. On the other hand, we will deal with the weaknesses of the financial instability hypothesis. These weaknesses are as follows: (i) the absence of class dynamics in the hypothesis; and (ii) the insufficient explanations for reasons for people's indebtedness.

According to Minsky (2008), neoclassical price theory has remained insufficient for analysing the efficiency of the different types of markets because of a lack of consideration of the capitalist economy in the context of its complex financial structure. Although the price system efficiently provides the allocation of resources and thereby the determination of the level of production in the economy, it neglects the price interactions with

debts and other factors related to the aggregate economic structure. The major reason for this depends on the usage of the financial assets. For instance, the different functions of money do not have a specific role in the neoclassical price theory.

However, Minsky (2008) puts forward a new method in the case of his investment analysis by depending on the interactions between price level and profit rates. The characteristics of the price system are different in the context of investment. For instance, it may create profits by borrowing from the financial system and then providing new possibilities for new types of production methods for goods and services as well as for the determination of the resource allocation and the production level.

Furthermore, the realisation of the initial investment should be provided for through the consumption of the produced goods in order to make new investments after this process (Minsky, 2008). In this realisation process, the prices of capital and the financial assets are the main determinants behind the impulses in new investments in the future (Minsky, 2008).

On the other hand, the other important point given by the Minskyan approach is the relationship between investment and the different kinds of methods for financing. According to Minsky (2008), the starting point for the investment decision is to focus on the sources of the financing methods. Minsky (2008) offers three types of financing methods in the determination of the investment: (i) cash flows and assets; (ii) internal funds; and (iii) external funds.

However, although cash flows and internal funds have a reasoning in the economic process of investment in their ways, Minsky (2008, p. xv) stresses the negative side of external funds by stating that "[i]f external (borrowed) funds are involved, then the supply price of capital also includes explicit finance costs – most importantly the interest rate but also all other fees and costs – that is, supply price increases due to lender's risk".Minsky (2008) also adds that the factors of uncertainty and risks play an important role in the financing methods of investment. For instance, if the investment financing is launched by debts, it is possible to see that risks emerge in the payment process of these debts coupled with the uncertain environment

of the economy. Therefore, if an indebted individual cannot pay his/her principle, the possible debt amount for the future period will be interrupted to a large extent (Minsky, 2008).

However, in 'tranquility' periods, banks will be more willing to volunteer to lend money, and therefore, they will reduce the demand margin of safety from the consumers (Minsky, 2008). For instance, Ivanova (2012, p. 64) states that "[i]n time, borrowing becomes riskier and there is a tendency for debt to grow faster than income/profits, which leads to corresponding changes in the liability structure of economic units". Additionally, Minsky (2008, p. xv) states that "[i]n a recovery from a severe downturn, [safety] margins are large as expectations are muted; over time, if an expansion exceeds pessimistic projections, these margins prove to be larger than necessary. Thus, margins will be reduced to the degree that projects are generally successful".

Furthermore, it is expected that banks take into account the consumer's power to pay back his/her loans at the expected time. However, Minsky (2008, p. 90) argues that "[t]he size of the margins of safety determines whether a financial structure is fragile or robust and in turn reflects the ability of units to absorb shortfalls of cash receipts without triggering a debt deflation".

Therefore, the mutual relationship between the investment decision and the financing methods propound those financial aspects of the investment (Minsky, 2008). In other words, according to Minsky (2008), investment is mostly a financial phenomenon. Dealing with this phenomenon gives us an insight in to the dynamics of the economic crises, which allows us to separate the real and financial factors behind them.

The other important point in the Minskyan approach is the critique of the foundations of neoclassical theory. In the neoclassical perspective, the problems that occur in the economy are temporary and very short-lived. The capitalist system has its own dynamics, which automatically and quickly turns back to its equilibrium point. Therefore, any intervention in the market system will break down the functioning in different kinds of markets and will interrupt the adjustment mechanism of the socalled

'invisible hand'.

According to the classical and the neoclassical approaches, the role of government should be based on the protection of the free market system rather than on any kind of intervention in economic processes. By following the requisite role, the system will be turned back to its equilibrium on short notice because individuals will choose the most efficient way for their resource allocation.

However, Minsky (2008) argues that depending on the rationality of people in the analysis of the capitalist system will not provide a useful guide and will also create some fallacies in making arguments about economic crises. For instance, Minsky (2008, p. 120) states that "[i]f the economy does not conform to the general equilibrium theory, if it is endogenously unstable, and if units behave accordingly, then rational expectations will exacerbate instability".

In other words, the capitalist system will be much more unstable in its own dynamics regarding business cycles and fluctuations. Additionally, it will have a much more fragile financial system within the arguments through rational agents pursuing the maximisation of profits, which may be considered as the other cause of the financial instability.

Thus, Minsky (1993) states that financial instability can be further explained by focusing on the relations among the existence of intermediate financial institutions, the pricing of capital goods and financial assets, the fluctuations of their prices, and the creation of profits at the end of the process.

One of the most important points in the Minskyan approach is an increase in indebtedness, which depends on the problems occurring in the cash flows. According to Minsky (2008), economic agents are constrained by cash flows in many aspects of the economic circumstances. In other words, there are restrictions on acquiring the necessary amount of cash flows. Therefore, these economic agents are steered toward debt issues in which they mainly make people more indebted. Even if these indebted portions of the money will be used in new investments for future plans, it can create

an increase in the instability of economic process.

For example, Minsky (2008, p. 300) argues that "because of the upward instability of the investment-financing-profits interactions, from time to time fragile financial structures emerge". He adds that "[f]ragile financial structures regularly break, which sharply reduces investment spending" (2008, p.300). Hence, any problem that occurs in the cash flows will in turn increase the risk ratio of the borrowers and therefore exacerbate the problems for economic agents. It also means that the increased debt ratio causes instability in financial relations through the increase in interest rates and the deficiency of necessary resources for economic activities.

Furthermore, these problems may create other problems in the financial transactions. For example, they can trigger the sale of financial assets by firms in order to ensure funds for new physical investments. However, this can cause a further fall in asset prices. Therefore, speculative profits will be reduced and the debt/asset ratio will have deteriorated. Each case is connected with three different cycles in the Minskyan approach. These cycles can be descried as follows: (i) hedge finance; (ii) speculative finance; and (ii) Ponzi finance. Palley (2010, n. p.) summarises these types of financing arrangements as follows:

The basic Minsky cycle concerns the evolution of patterns of financing arrangements, and it captures the phenomenon of emerging financial fragility in business and household balance sheets. The cycle begins with 'hedge finance' when borrowers' expected revenues are sufficient to repay interest and loan principal. It then passes on to 'speculative finance' when revenues only cover interest. Finally, the cycle ends with 'Ponzi finance' when revenues are insufficient to cover interest payments and borrowers are relying on capital gains to meet their obligations.

Ivanova (2012, p. 60) also adds that:

…in an economy with privately owned capital assets and complex financial institutions, periods of prolonged prosperity encourage the move from a stable financial structure dominated by hedge finance to an unstable structure dominated by speculative and Ponzi finance. Financial instability

is thus endogenously generated and developments in the financial sector end up disrupting the real economy.

All in all, these assumptions reveal the major factors behind the financial instability hypothesis of Minsky. In the context of this hypothesis, uncertainty, risk, cash flows, and increasing indebtedness create new perspectives about the reasons for the current financial crisis that emerged at the end of 2007. However, these perspectives cannot generalise all other economic crises that happened in the past forms of the capitalist system. For instance, there is an important distinction between the Great Depression of 1929 and the financial crisis of 2007/2008 within the frame of an increasing debt ratio towards new investments. While for the Great Depression, higher ratio of debts towards new investments were provided the recovery of the economic system, the economy was led into a deep recession as a result of an excessive debt ratio in the financial crisis of 2007/2008. Therefore, we turn back to additional two issues in that context, which the Minskyan approach does not address: (i) the absence of the analysis of class dynamics; and (ii) insufficient investigations for the reasons behind increasing indebtedness.

The Minskyan approach does not focus on the lists of solutions on the current crisis in detail. For instance, the only solution to a crisis in the Minskyan approach is the construction of a 'big government and big bank', and the major policy recommendation for the provision of the crisis is the usage of tight financial regulation against the liberalised financial sector. Minsky (2008) argues that financial regulations and the limits imposed on these regulations in terms of the financial sector and more specifically the capitalist system produce the factors for the stability of the economic environment. However, we should also answer the following question: How can we deal with these policies in case of class dynamics?

The financial instability hypothesis asserts that economic problems basically emerge in the cash flows between individuals and firms. Therefore, the indebtedness ratios in the case of investments increase to the detriment of the capitalist system. Also, because the economic agents are not entirely free to achieve cash flows, this leads to an increase in the rate of indebtedness as a result of borrowing from the financial markets and

institutions. This is the main point from which the issues arise in finance and, thereby, in economic relations.

If the major motive for the capitalist system is to maximise profits, the basic way to do so is by reducing costs in the production process. In an aggregate costs account, the labour costs (i.e., the compensation of employees) compose the highest amount of costs relative to others that have emerged in the production of goods or services. Hence, these costs depend on the bargaining power of the labour in class dynamics, and the capitalist system always tries to repress them. However, Minsky does not focus on the class-based distributional issues in his theoretical framework. Instead, the poor economic indicators are much more common in his arguments so as to understand the dynamics of economic relations and economic crises.

Furthermore, Minsky does not explain anything about why households became much more indebted after the 1980s era of the neoliberal structure. Therefore the changing factor shares are not the basic point of the theoretical framework of Minsky. He basically argues that the government role in the economic system and its ability to organise the capital constitute the major points through which to stabilise an unstable economy. However, he ignores the interaction between government activity and firms (especially the multinational and transnational giant firms) in the case of making policies towards the maximisation of capital, especially at the time of economic crises. Although he ignores the interaction between the government and firms, he puts forward arguments about the role of accumulation of capital in the case of the inability of the capitalist system to maintain targeted full employment and the prices. Minsky (1993, n. p.) states that:

[o]ne striking flaw of capitalism – which was identified by Marx and Keynes – is its inability to maintain a close approximation to full employment over extended periods of time. Keynes recognized that capitalism is not merely a market economy: it is also a financial system. A fundamental aspect of the capitalism of Keynes' time and ours is that there are *two* sets of prices. One set consists of the prices of current output and the other set consists of the prices of assets, both the capital assets used by firms in production and the financial instruments that firms issue in order to gain control of the fixed and working capital they need.

The dynamic relations among the economic figures are the major sources of the fragility and the instability of the capitalist system and, more specifically, the accumulation of capital. Hence, from the above quotation of Minsky, the accumulation of capital should be investigated within the frame of both real and monetary factors. However, the largest impact depends on the issues emerging on the monetary side of economic relations.

In the case of the distinction between the real and monetary sides of the economic system, structural Keynesianism offers many steady arguments for this issue by focusing on the shortcomings of the Minskyan approach. One of the distinctive features of structural Keynesianism is that it deals with the income distribution effect on the aggregate demand in the context of class dynamics. For instance, Palley's (2010) arguments provide the further development of Minsky's financial instability hypothesis. According to Palley (2010, n. p.), the structural Keynesian approach offers a synthesis within the following views:

First, it shares the generic Marxist point of view that there is an underlying real economy problem regarding wage squeeze and deterioration of income distribution, which ultimately gives rise to a Keynesian aggregate demand problem… Second, structural Keynesianism recognizes that finance played a critical role in sustaining the neoliberal regime by fueling asset price inflation and borrowing, which filled the demand gap created by the wage squeeze. That recognition opens the way for incorporating Minsky's financial instability hypothesis, with financial excess being the way that neoliberalism staved off its stagnationist tendency. This in turn explains why the crisis took the form of a financial crisis when it eventually arrived.

CROTTY AND THE ROLES OF MONEY, CREDIT, AND FINANCIAL INTERMEDIATION IN MARX'S CRISIS THEORY

Marxian perspectives are mostly focused on the problems that arise in the real economy in terms of the analysis of capitalist crises. Hence, explanations for the financial side of capitalist relations in the Marxian framework are somewhat lacking. Although there are crucial theoretical assumptions about the functioning of the financial sector (see Bukharin, 1917; Hilferding, 1910; Lapavitsas, 2008; Lapatsioras, Maroudas, Michaelides, Milios, & Sotiropoulas, 2009; Lenin, 1996; Luxembourg,

1972), the dynamics of the crises theories of the Marxian approach are dependent on the issues in the real economy. Therefore, two distinctive concepts of financial relations money and credit are entirelu investigated within the context of the real economy.

Related to this issue, we will stress Crotty's (1985) article titled "The Centrality of Money, Credit, and Financial Intermediation in Marx's Crisis Theory: An Interpretation of Marx's Methodology". Crotty's study explores critical arguments so as to fill the gap in the Marxian framework with regard to economic crises by the compounding of finance with the real sector according to the Marxian theoretical structure. The study principally attempts to show the importance of the tripartite relations between money, credit, and financial intermediation for the analysis of the Marxian framework within the structure of capital accumulation and capitalist crises. As Crotty (1985, p. 2) states:

Our major objective is to demonstrate that the relative neglect of money and finance in the Marxian literature is inconsistent with Marx's own emphasis on these aspects of accumulation and crisis and to show that the de facto dismissal of the centrality of money and finance in much of this literature is based on a basic misunderstanding of Marx's analytical methodology.

Crotty's main objective is to investigate the reasons relating to the factors of the financial and the monetary sides of the Marxian crisis theory. Crotty (1985, pp. 3-4) states that when Marx switched his arguments from simple commodity production (SCP) C[Commodity]-M[Money]-C[Commodity] to commodity exchange economy M[Money]-C[Commodity]-M[Money] he took a step through the establishment of monetary theory in regard to existing functions about money. As Crotty (1985, p. 4) exaplins, "…before Marx even begins his analysis of specifically capitalist production relations he has established that the theory of money and credit and the theory of crisis are so intimately intertwined that they are analytically inseparable".

Crotty (1985) also criticises the traditional assumptions about Marx's theory of crisis, which are basically focused on the real side of the economy. He (1985, p. 5) underlines this issue by arguing that: "…the fundamental reason that the traditional crisis theory literature incorrectly

relegates monetary and financial aspects of crisis theory to such an inferior analytical status is its failure to appreciate the theoretical significance of Marx's analysis of the crisis potential of commodity exchange".

According to Crotty (1985, p. 2), the main points are founded at the highest level of abstraction of SCP and in Parts Four and Five of Volume Three of Marx's *Capital: A Critique of Political Economy* in the context of the analysis of credit and financial intermediation. Therefore he primarily attempts to organise the fundamental factors related to the financial and monetary aspects of crises in order to understand the dynamics behind the establishment of the financial theory in the Marxian approach. However, Crotty (1985, p. 6) states that "[u]nfortunately, Marx's criticisms of schools of thought that see all crises as imposed by 'irresponsible' financial activity on an otherwise crisis-free capitalism have been frequently misinterpreted as an argument that the financial system is an unimportant aspect of his crisis theory".

This means that more emphasis on financial relations necessitates more of a correction of the misunderstanding in the Marxian crisis framework. Therefore, Crotty (1985) starts from the very beginning of the theoretical foundations of the Marxian crisis approach within the context of SCP. He (1985) indicates to the point that the abstract form of the crisis depending on individual behaviours through financial relations creates major parts within the SCP. On the explanation for the abstract form of crisis, Crotty (1985, pp. 6-7) states the following:

The term *form* refers to an economic model, in this case a model of simple commodity circulation. The adjective *abstract* indicates that the models to be considered are quite simple, incorporate little or no institutional detail, and, most important, abstract as much as possible from reference to specific relations of production: the analysis of these abstract forms *of* commodity exchange never leaves the sphere of circulation. They are forms or models of *crisis* because Marx uses them to demonstrate that a commodity exchange economy is crisis prone or has crisis potential independently of its specific production relations.

Depending to these cases, Crotty (1985, p. 7) specifies five different

functions of money as an abstract form of crisis founded in SCP: (i) as a measure of value (MMV); (ii) as a means of circulation (MMC); (iii) as a store of value, or hoard (MH); (iv) as a means of payment (MMP); and (v) as a means of international payments settlement or world money. According to Crotty (1985), MMC and MMP are the central points that may cause an emergence of crises. He (1985, p. 9) argues that "…Say's Law cracks under the weight of MMC" and thereby results in more advanced functions of money. For instance, MMP transforms the economic system into a more fragile structure, rendering the economic environment more crisis-prone.

Therefore, we begin with the analysis of MMV. Volume One of Marx's *Capital* (1982 [1976]) marks a difference between the barter economy (C-C) and the SCP (C-M-C). The main difference depends on the addition of money (M) into circulation. According to Crotty (1985, p. 9), "SCP is… qualitatively different from barter in that it separates the acts of purchase and sale in time and space and inevitably draws vast numbers of producers into a complex, interlocked, interdependent *system* of social relations of production and exchange".

For this point, the most important thing is the rejection of Say's Law. As Crotty (1985, p. 9) mentions, "The fundamental distinction between Marx's analysis of the dynamics of advanced commodity exchange and 'the childish babble of a Say' or…of a Walras or a Friedman, is precisely the distinction between a monetary economy and barter".

The inclusion of money into the SCP is also indicated at the end of the period for the barter economy. As such, the time factor is also included in the economic process between the exchange of goods and services. In this context, an introduction of money to the SCP also leads to the emergence of two new related monetary concepts in the Marxian framework: (i) money as an asset, 'hoard', or store of wealth; and (ii) the 'velocity' of money (Crotty, 1985, p. 10). For instance, these concepts can be seen in Marxian overproduction theory. As Crotty (1985, p. 10) states, "…money can be held rather than spent for some variable period of time. Moreover, the idea that velocity can slow down is intimately related to Marx's assertion that there can be a general excess supply of commodities – a crisis of reproduction – in SCP".

Alternatively, this means that, in some periods, households may want to hold cash money either for hoard or store of value. However, this may lead to an excess supply of commodities and thereby creates the conditions for problems emerging as an overproduction.

Indeed, MMV plays an important role in Marx's SCP analysis. "By MMV, Marx refers to the *estimate* of the value of a commodity made by its owner or by others prior to its actual sale" (Crotty, 1985, p. 11). In addition, MMV focuses on "…the expectations of commodity owners as to the value they will receive in the market…" (Crotty, 1985, p. 11). However, according to Marx (1982 [1976]), money should be used as a means of payment so as to emphasise any crisis theory in the SCP. As Crotty (1985, p. 12) states:

It is only with contracts, credit and financial intermediation, and with time-consuming interdependent production and circulation processes involving long-lived capital goods that the potential differences between the price expectations that guide decisions to produce and prices *actually prevailing* at the time of sale take on a key, and often a dominating, role in crisis theory.

This also indicates the point that the economic process is transformed from SCP to a commodity exchange economy by the following:

[t]heorizing MMP in SCP constitutes a qualitative increase in the analytical power of the framework as a form within which to build a concrete theory of capitalist crisis. And it is with the SCP-through-MMP abstract form of crisis that Marx introduces contracts, and commercial credit and paves the way for the introduction of financial intermediation into his theory of crisis. (Crotty, 1985, p. 14)

The introduction of MMP for the base model also produces the conditions for the financial crises, increases the fragility of the economic relations, and disrupts the reproduction of capital by the change in time. In this case, the contracts are the main determinants of the development of circulation. As Crotty (1985, p. 15) explains, the "…first type of contract discussed by Marx is one made to reduce the uncertainty involved in obtaining a given commodity at a given time at a given price".

Moreover, the selling of commodities differs in the form of both MMC and MMP. In the form of MMC, commodities are sold for their use-value, but in the form of MMP, commodities are sold for a further accumulation of capital. Also, according to Crotty (1985, pp. 15-16):

…the addition of the function MMP to the SCP form extends the separation in time between purchase and final sale involved in commodity circulation and makes the process more complex: instead of two separate acts required to complete circulation – C-M and M-C – we now have three – C-D; D-M; and M-D, where D stands for a debt contract.

Crotty (1985, p. 16) also adds that "…the compulsion to sell, the forced sale of commodities…by the indebted commodity-owner creates 'that aspect of an industrial and commercial crisis…known as a monetary crisis' and lays the foundation for the conceptualization of the financial crisis".

However, unlike the MMV and MMC, MMP is unpredictable in an understanding of the conditions of crisis in the SCP. Crotty (1985, pp. 16-17) states that "[s]ince purchase and sale, supply and demand are 'independent', no agent can be sure that the labor embodied in his commodities will be exchangeable for an equal amount of the socially necessary labor time of others".

Furthermore, he (1985, p. 17) argues that "[t]he agents in the first abstract form of SCP, in other words, are subject to the anarchy of an economy not under their control. Therefore, they are vulnerable to the threat of unforeseeable, unavoidable capital losses caused by an unequal exchange of labor-time as prices fluctuate between production plan and sale".

Contracts and credits create fragility in the reproduction of capital, which then makes the capitalist system more crisis-prone. However, the emergence of large-scaled fragilities and crises are not possible in the MMV and MMC. In other words, the major reason behind the increasing potential for crises is the incorporation of MMP into the SCP.

Related to this issue, Crotty (1985, p. 19) argues:

Two central elements are involved in Marx's stress on the significance of MMP… First, agents undertake contractual commitments at one point in time to exchange money (or commodities) at a specific time in the future. These contracts are based on estimates or expectations of the prices and values that will prevail at the relevant future date …Second …the contract economy develops not just isolated reciprocal future commitments between pairs of agents, but a complex interdependent *system* of interlocked commitments drawing most agents into its web.

All in all, Crotty (1985) focuses on four different phases in case of the ways that transform the SCP into the capitalist production system.

First, since the modern capitalist system is a commodity exchange system, the analysis of the crisis based on the SCP must be transformed into the crisis theory. In addition, since the modern capitalist system exhibits the highest stage of production, the advanced model of the SCP is applicable to the capitalist system's laws of motion. This is the turning point for production relations. As Crotty (1985, p. 23) states, "Until we have theorized the production relations of a particular mode of production and integrated this theory with the SCP model, we cannot develop an adequate analysis of its laws of motion".

Second, Crotty (1985, p. 23) argues the following:

The development of capitalist social relations proceeded historically alongside the evolution of the contract-credit system in a symbiotic relation with it. Thus, although the abstract form of SCP including MMP belongs to Marx's theory of commodity exchange, it is capitalism that deepened, widened and intensified contract-credit relations.

This second case also indicates the developing path of the financial intermediation, the financial structure, and the financial relations of the capitalist mode of production.

Third, the key consideration behind the dynamics of capital accumulation and thereby the economic crisis is the changing rate of profits. As Crotty (1985, p. 25) argues, "…the important point is…accumulation, which

requires some historically specific minimum rate of profit to sustain itself, eventually causes the rate of profit to decline, thus destroying its most important condition of existence".

This condition also prepares the conditions for construction of a unified theory of capitalism in line with an increasing capital accumulation and decreasing rate of profit. However, Crotty (1985, p. 26) argues that the major problem is the "…failure to comprehend the existence and significance of the theoretical articulation of the laws and tendencies of the rate of profit deduced from the sphere of production with Marx's analysis of monetary and financial phenomena…".

Finally, Crotty (1985) stresses the explanation for the unity of circulation and production in order to integrate the above mentioned tendencies or laws of production relations into the analysis of abstract crisis forms so as to construct a unified theory of the capitalist reproduction process. Therefore, Crotty (1985, p. 26) states the following:

A complete integration of the spheres of circulation and production in the theory of accumulation and crisis would have to consider all four effects of the contract-credit system: (1) the overextension of the expansion; (2) the increasing vulnerability of the expansion to adverse financial or nonfinancial developments; (3) the codetermination of the timing of the crisis; and, (4) the deepening and widening of the contraction.

THE SCHUMPETERIAN APPROACH

In this section, we will focus on the arguments of Schumpeter (2003) by referring to his famous book, which is titled *Capitalism, Socialism and Democracy*, in order to understand financial motives in the context of the innovation led by technological progress. Basically, industrial development implies the crucial point in the theoretical discussions of Schumpeter's analysis. In addition, the development process of industry exhibits permanent changes in its own structure depending on innovations. Therefore, the Schumpeterian approach is theorised on a dynamic framework, not a static one. As Schumpeter (2003 [1943], p. 104) states:

It should be observed that the defining feature of dynamic theory has nothing

to do with the nature of the economic reality to which it is applied. It is a general method of analysis rather than a study of a particular process. We can use it in order to analyze a stationary economy, just as an evolving one can be analyzed by means of the methods of statics ('comparative statics'). Hence dynamic theory need not take, and as a matter of fact has not taken, any special cognizance of the process of creative destruction which we have taken to be the essence of capitalism. It is no doubt better equipped than is static theory to deal with many questions of mechanism that arise in the analysis of that process. But it is not an analysis of that process itself, and it treats the resulting individual disturbances of given states and structures just as it treats other disturbances. To judge the functioning of perfect competition from the standpoint of capitalist evolution is therefore not the same thing as judging it from the standpoint of dynamic theory.

In the context of that dynamic modeling process, Schumpeter (2003) argues that the economic development reache the new equilibrium point where production and the industrial relations become more complex. Therefore, the changing framework of the industrial structure creates a prominent way to understand the increasing role of entrepreneurs and thereby, entrepreneurship in the capitalist system. For instance, according to Schumpeter (2003 [1943], p. 132), in the context of the relations between the entrepreneurs and the changing market economy:

[w]e have seen that the function of entrepreneurs is to reform or revolutionize the pattern of production by exploiting an invention or, more generally, an untried technological possibility for producing a new commodity or producing an old one in a new way, by opening up a new source of supply of materials or a new outlet for products, by reorganizing an industry and so on.

Entrepreneurs exhibit a proactive role in the capitalist system due to their progressive characteristics both for different sectors and aggregate economy relations. In other words, the major feature of entrepreneurs is to change the scale of entrepreneurship from its inactive form into an active form that results in an increase in innovations. Or, alternatively, the increasing scale of innovations leads to the growth of the dynamic position of entrepreneurship in aggregate economic relations. Schumpeter discusses

the changing pattern of innovations within the frame of his famous concept creative destruction', which stimulates us to understand the following two basic factors (to be explained in more detail): (i) the rate of an increase in total output; and (ii) the theory of creative destruction.

First, Schumpeter (2003) argues that the major reasoning behind the capitalist system can be entirely understood through an investigation of the dynamics of aggregate production. As he (2003 [1943], p. 63) states, "A first test of economic performance is total output, the total of all the commodities and services produced in a unit of time…". However, changes in the methods for measuring the amount of produced goods may create some problems between the categories of the aggregate economy. Therefore, the measurement, in that sense, "…for not only the material and the technique of constructing such an index [production index], but the very concept of a total output of different commodities produced in ever-changing proportions, is a highly doubtful matter" (Schumpeter, (2003 [1943], p. 63).

According to Schumpeter (2003 [1943]), the Marxian perspectives on the distribution of income are not well developed both theoretically and practically in the development process of the historical context. The historical evidence posits that the rich would not get richer and the poor would not get poorer than their existing conditions, in contrast to what Marx tried to show of the capitalist system; namely, that it would increase the inequality of income and wealth between capitalists and labourers in different dimensions. Rather, Schumpeter (2003 [1943]) stated that the income pyramid did not change too much from the period of Marx to his time, but the wages and the other income components exhibited a kind of sluggish movements.

Additionally, Schumpeter (2003 [1943]) argued that the bottom line of the income pyramid would escape from poverty and the problems related to the income inequality through the renewal of the capitalist system for 50 years from 1928 to 1979, depending on his method of measurement for the rate of increase in total output and the official statistics.

Schumpeter (2003 [1943]) did not have any such meaningful insights for

the analysis of profit-maximisation and the theory of the determination of surplus-value. However, he benefited to a large extent from these two concepts, especially from the theory of surplus-value, in making arguments for creative destruction. He also focused on the sociological datasets by referring to Marx so as to analyse the ups and downs of economic activities in the case of capitalist development and historical transformations. For instance, Schumpeter (2003 [1943], p. 20) argues:

Now, though Marx *defines* capitalism sociologically, i.e., by the institution of private control over means of production, the *mechanics* of capitalist society are provided by his economic theory. This economic theory is to show how the sociological data embodied in such conceptions as class, class interest, class behavior, exchange between classes, work out through the medium of economic values, profits, wages, investment, etc., and how they generate precisely the economic process that will eventually break its own institutional framework and at the same time create the conditions for the emergence of another social world.

The post-industrial revolution era introduced new techniques in the production system and the financial transactions and thereby conceived new developments in historical process that resulted in new kinds of revolutions depending on the class contradictions between capitalists and labourers. According to Schumpeter (2003 [1943], p. 68):

These revolutions periodically reshape the existing structure of industry by introducing new methods of production…the merger movement; new sources of supply…new trade routes and markets to sell in and so on. This process of industrial change provides the ground swell that gives the general tone to business: while these things are being initiated we have brisk expenditure and predominating 'prosperity'…and while those things are being completed and their results pour forth we have elimination of antiquated elements of the industrial structure and predominating 'depression'.

Schumpeter (2003 [1943]) does not express his arguments for the determination of the rate of total output without focusing on unemployment as one of the major factors behind revolutions. In the theoretical discussion

of Schumpeter (2003 [1943]), unemployment creates a kind of tragedy in economic and social frameworks as a traumatic factor for promoting revolutions. Therefore, Schumpeter (2003 [1943], p. 70) remunerates the socialist tradition due to its achievement of high rates of employment in an aggregate economy but also adds the following:…[T]he real tragedy is not unemployment *per se*, but unemployment plus the impossibility of providing adequately for the unemployed *without impairing the conditions of further economic development*: for obviously the suffering and degradation – the destruction of human values – which we associate with unemployment, though not the waste of productive resources, would be largely eliminated and unemployment would lose practically all its terror if the private life of the unemployed were not seriously affected by their unemployment.

Secondly, theoretical discussions on creative destruction fashion another step in the Schumpeterian approach to understand the changing dynamics of the total economic framework along with the increase in the rate of total output. The theory of surplus value of Marx (1982 [1976]) provided a theoretical structure for Schumpeter to make his arguments about creative destruction.

He (2003 [1943]) stated that the newly introduced consumption materials, production methods, transportation technologies, markets, and industrial organisations all led to an increase in the development of the capitalist system. For instance, the emergence of new markets in line with developing foreign markets and the transformation of handicraft workshops into multi-factorial production mechanisms provided ceaseless renewals of the capitalist system. However, these renewals were not based on static conditions but rather on dynamic conditions, which means that they were continuously destroying the oldest versions of the production methods so as to create new versions in the context of the severe competition between domestic and international markets. As Schumpeter (2003 [1943], p. 83) states, “This process of Creative Destruction is the essential fact about capitalism. It is what capitalism consists in and what every capitalist concern has got to live in”.

Therefore, in the context of creative destruction, Schumpeter (2003 [1943],

p. 83) stressed two types of problems that evolved within the development path of capitalism. First, the process of the capitalist system in line with the above mentioned factors should be evaluated with the time dimension, especially for the long term. Second, these factors should be investigated within the frame of the organic development path of the capitalist system in order to form a comprehensive outlook towards the socio-economic conditions.

Innovators and their innovations are the disruptive forces in the growth path of economic development in the context of creative destruction, which leads to a comprehensive change in the capitalist system. In other words, these disruptive forces, led by new innovations in an aggregate economy, undermine the institutional framework of the capitalist system. Therefore, they negatively affect the economic development path and thereby create the structural basis for both economic and social crises. All in all, Schumpeter (2003 [1943], p. 139) concludes that:

[i]n breaking down the pre-capitalist framework of society, capitalism thus broke not only barriers that impeded its progress but also flying buttresses that prevented its collapse. That process, impressive in its relentless necessity, was not merely a matter of removing institutional deadwood, but of removing partners of the capitalist stratum, symbiosis with whom was an essential element of the capitalist schema…the capitalist process in much the same way in which it destroyed the institutional framework of feudal society also undermines its own.

CONCLUSION

In this paper, we focused on three different approaches. First, we started with the Minskyan framework, which was an important approach in dealing with the financial sources of economic crises. Unlike the traditional approaches, which were mainly focused on the real sources of the economic crises, Minsky theorised his arguments upon a different kind of frameworks known as the financial instability hypothesis. Second, we focused on an analysis of Crotty in order to understand the role of money, credit, and financial intermediation in Marx's crisis theory in terms of the financial crises. Finally, we analysed two basic features of the Schumpeterian approach changes in the rate of aggregate output and

the concept of creative destruction so as to understand the dynamics of the crises of the capitalist system.

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