Abstract
The economic crises challenge organisational performance, its prosperity and sometimes even its existence. Managers and leaders take several actions to face these situations. This paper reviews some key economic crises in order to theorise the lessons to learn from them. The aim is to present the applicability of these lessons as a frame of knowledge for business graduates. The crises occurred in Mexico and Chile in 1980’s are reviewed to discuss the importance of Productivity. Chaos Theory, Turbulence and the dynamics of the economical system are explored to understand the crises’ manifestations. Finally, global interconnectivity is discussed in the frame of the sub-prime mortgage crisis.

Key words: Productivity, Turbulence, Globalisation.

JEL Code: D23, G01, L20

Introduction
Crisis is usually taken as a negative event against organisational performance. For Hermann (1963) “organisational crisis (1) threatens to high-priority values of the organisation, (2) presents a restricted amount of time in which a response can be made, and (3) is unexpected of unanticipated by the organisation”. Seegar (2003) defines crisis as a fundamental threat for the system stability, a questions of core assumptions and beliefs, and threats to high-priority goals, including image, legitimacy, profitability, and even survival. However, as Veber (2009) recalls, the word “crisis” in Chinese language is also understood as an opportunity. The unexpected phenomenon also brings opportunities (e.g. doing business in crisis). Moreover, every single event at the organisation is a learning source for improvement and the experience from challenging crises is one these sources.

The economical system experienced and challenged several crises. This is an important body of knowledge. Authors analyse crises from different points of view. These analyses are a large source of valuable lessons for business graduates. Therefore, this paper reviews 3 management principles under the frame of these analyses. These principles remain valid even through and after crises. The intention is primarily pedagogical. It is the
theorisation of the permanent value of management principles in the current economical system.

1 Reforms and productivity

During the Asia 21 conference, Dominique Strauss-Kahn (International Monetary Fund, 2010) recalled the Asian 97/98 meltdown and said: “We have learned the importance of focusing on essential policies and of protecting the most vulnerable, when tackling a crisis”. However, the research work of Kehoe and Prescott (2007) about 12 great depressions in the 20 century finds out that an excessive political governmental reaction to face the crisis tent to take the economy to a longer and deeper depression.

Fig. 1: Real GDP per working age person in Chile and Mexico

The comparison between the economies from Chile and Mexico between 1980 and 2005 is a good example (Fernández de Córdoba & Kehoe, 2009). It is necessary to make critical reforms to face a crisis, but those reforms have to be focus on keeping or increasing productivity. The excessive protection from the market dynamics are against to a productive improvement. Bergoeing et al. (2002) argue that the effects on efficiency are crucial to describe the differences between Mexico and Chile crisis recovery. “Most of the differences in the paths of recovery stem from differences in productivity and not from differences in factor inputs (Capital and Labour)”. In one side, Chile made fast deep reforms to bend the
crisis. These reforms were costly at the beginning of the crisis. However, the reforms focus on long term productivity. They took the economy to a fast growth recovery path. This is still seen even today. It locates Chile at the top of region’s economies. In contrary, Mexico reforms were conservative. They protect the economic actors from market dynamics. In addition to, the reforms took long to be decided as well as to be applied. But, the reforms were less costly. This approach took them to a long path of recovery with modest increments (sometimes seen as depression). This case shows that focusing in efficiency and productivity is costly at the beginning but guarantee a long term high wealth.

Pritchard (1995) argues that “all types of organisations need to be productive as possible to best utilize their precious resources, to meet their customers’ needs, and stay competitive with similar organisations”. In his point of view, organisations become productive by improving technology (the engineering side). This includes machines and tools, but also the technique or processes. Moreover, organisational long term productivity growth focuses on people’s acceptance of technology. They are using the technology within the organisation. In other point of view, organisation must be productive because its customers are asking every time for more. Berman (1998) argues that the customer influences organisational decisions about the services and its delivery.

Productivity is demanded for people and performed by people. A lesson to successfully challenge a crisis is that the reforms or actions to take must face the beat from crisis, but they also must guarantee the long term recovery for the people and with the people. As Daft (2010) argues, “organisations exist when people interact with one another to perform essential functions that help attain goals”. For Daft (2010); “organisations are social entities that are goal-directed, are designed as deliberately structured and coordinated activity systems, and are linked to the external environment”. Therefore, the recovery comes by scope and then scale. It comes by inventing new ways to satisfy customers’ needs while been rational with the cost that this implies.

There are other solutions to reduce the highest cost of the organisation (e.g. salaries) without losing the experience and knowledge of the people for future productivity. For example, Skoda Auto adopted a four-day week to reduce by 25% the cost of wages in the first half of 2009 due the expected demand shrink. Moreover, Skoda Auto got a sales record in 2009 (Skoda Auto, 2009). Facer and Wadsworth (2010) findings about compressed work weeks (from the organisation perspective) show that “the most common organisational benefits from alternative work schedules were improved employee morale (64% of respondents), improved work/family balance (54%), improved customer service (46%) and
increased employee productivity (41%)”. All of these aspects show a positive influence in the people’s performance and their results for the organisation. Therefore, long term actions taken in the frame of a crisis have the option to improve organisational productivity. Then, the long term productivity is the first lesson to relearn.

2 The stability of the unstable

The economical system is naturally unstable. There are 3 concepts to explore in order to understand this inherent property: Chaos, Turbulence and the dynamics of economical system.

There is always a probability of rain in a sunshine weather forecast. This observation confirms the unpredictability of system variables. This is referred as the butterfly effect. Lorenz (1963), consider the father of chaos theory, defines chaos as “the property that characterises a dynamical system in which most orbits exhibit sensitive dependence”. This principle is included in different sciences (from biology to economics). Chaos is part of the nature. Biology has already determined the process of leaves’ grow in a tree. But, the exact leaves’ grown point in a branch is far to be argued. For organisations, chaos is the economical environment or its market. There are a lot of variables that influence that environment (e.g. government policies, competition, financial system, etc.). The forecast explains the behaviour of those variables; but they are unable to exactly predict their future values (e.g. sales forecast shows the desirable, recommended or planned units to be sold. The exact amount of units sold is shown in accounting reports.)

Similarly, Drucker (1968) introduces the concept of turbulence arguing that the only stable variable in the economical system and in its organisations is change. Drucker (1968) recommends management to be aware of it. Turbulence is also in change. Kotler (2009) defines turbulence as an increment of risk and uncertain. He argues that turbulence increases due the global interconnectivity and the speed of commercial transactions. For Smith and Raspin (2008) there are “two inexorable market factors that are making its understanding more difficult: the growing complexity of markets and the increasing turbulence they exhibit”. Their argument continues: “If complexity is the number of market factors impacting on the organisation, turbulence is best defined as the rate of change of those factors”.

The dynamics of the economical system and golden ages are analysed by Perez (2002). Her findings about technological revolutions and financial capital show that crisis is a “historically recurrent phenomenon, it is endogenous to the market system and it results from
the way technical change is assimilated”. According to her research, every 40 or 60 years, emerges a new technological revolution and replaced the previous one. The endless human need for development, improvement and knowledge creates these revolutions. Each revolution brings many opportunities for development. These opportunities are for the professionals of the new technologies as well as for their users. These users apply the new technologies to improve own processes, products and services.

Fig. 2: Technological revolutions and techno-economic paradigms

Perez (2010) argues that every revolution is divided into two periods. The first period is called installation. It is the moment when the new paradigm emerges and is struggling against the old paradigm. Investors recognise the potential of new technologies. They shift investments to projects, organisations and businesses with new technologies (e.g. internet focus on the 90’s). This phase is mainly led by financial capital and a growing gap between rich and poor. Installation period ends with a technological bubble. This expands and then generates the breakthrough or crisis. Uncertainty, recession, instability, and so are the characteristics of this period. These factors lead managers and leaders to make changes. These changes focus on the break point (recession, depression) and they prepare the economy for the next period called deployment. In opposition to installation period, deployment period is characterised by the common use of the new paradigm. It is led by production capital. Once again, the system is able to offer and to provide some social benefits. It is a period of growth, development and prosperity. But unfortunately, another twist comes at the peak of this period. The market is exhausted. It looks after new things. A new revolution, another historic moment of the system, arrives.
Her research confirms that the economical system needs changes. It is just matter of time until the new bubble arrives and breaks up creating high uncertainty. However, the next crisis is unpredictable, but it is possible to be forecasted.

Chaos, turbulence and the inherent dynamic of the economical system are natural. Permanent stability is a negative sign. Kriegal (1991) explain this argument. If the system is working perfectly and stable, it is necessary to perform some changes because there is a high possibility that something is working out of the plan. There are several methods to drive the changes. Deming (1950) cycle, Hammer (1993) business processes reengineering or Goldratt (1984) theory of constraints; are just some of them. These methods are available to be applied. All of them aim for organisational improvements by planned changes. Then, the main lesson to learn is the natural instability of the economical system. Crises happen any time.

3 The interconnected global world

The 2007 global financial crisis shows the highly interconnectivity among all actors at the system. “The financial institutions had become highly interconnected on a worldwide basis” (Shirakawa, 2009). The information and communication technologies (ICT) rise to increase the awareness that “networks play major role in the growth of financial markets” (Sheng, 2010). The trigger of 2007 financial crisis (subprime mortgages) are beyond its global complex effect (Caballero & Simsek, 2009). The mass interconnectivity of the system, the number of actors on it and the links among them; are complex system. In addition to, the financial derivates were that blend in this complex system that its consequences were for all underestimated. Caballero and Simsek explain (2009): “during severe financial crises the complexity of the environment rises dramatically, and this in itself causes confusion and financial retrenchment”. Seeger et al. (2003) confirm this point from other perspective. For them, most of the crises have one interesting feature. Usually, there is someone aware of the threat but it is unable or unwilling to communicate it (Seeger, Sellnow, & Ulmer, 2003). The world shares a lot of information all the time, but it is unguaranteed that the information is totally understood. It is that complicated and costly to understand the big picture that uncertain and risk increases because nobody is able to track all possible implications (Seeger, Sellnow, & Ulmer, 2003).

The 2007 crisis proves the high natural interconnectivity of the system. ICT helps in the illustration of this phenomenon. However, this global interconnected world has been described before. Simon (1991) presents a metaphor to analyse the market economy from the
eyes of a mythical visitor from Mars. The observation (Mars’s visitor) describes a network of coloured dots (organisations) interconnected and some isolated non connected dots (e.g. some unplugged communities in the 3rd world). Simon (1991) concludes that this system should be called organisation economy instead of market economy. The interaction among the organisations is making the system alive. The existence of the system is based on the interconnections. This is the concept of synergy. The relations among the parts of the system have more value than separate parts. Or as Corning (2002) explains “the combined or co-operative effects produced by different parts that operate together, or the results that cannot be achieved if the parts are working separately”.

As Kotler (2009) recalls, “nowadays the interconnectivity between national economies, commerce running at speed of internet and mobile device; substantially raises the level of risk and uncertainty for producers and consumers”. Then, the inherent complexity of interconnectivity is the lesson to learn. Any action from any actor within the system has an effect on any other actor at the system. This is a main characteristic of the current economical system.

**Conclusion**

There are several lessons than to be learnt from the economic crises. Moreover, this paper focuses on 3 main lessons (productivity, instability and interconnectivity). These lessons are management principles. Organisations have the opportunity to learn from different economic crisis; especially from their lessons. These are valid principles for organisational prosperity.

Productivity is presented in the frame of anti-crisis actions. Chile and Mexico recovery paths show that the reforms based on productivity are costly but with a positive long term effect. The reforms focus on protecting the economic actors from the market dynamics increases the possibility of depressions. These reforms are less expensive in the short term, but prevent the long term growth. The aim of the reforms is to face the current effects of the crisis, but also the aim of the reforms is to guarantee the future prosperity. The lesson is: productivity challenges the crisis in long term.

The economical system is naturally uncertain. The history of the economical system shows that crises are a recurrent phenomenon. The crises come by cycles lead by technological revolutions. It occurrence improves the system itself, but the length of the cycle is unpredictable. Stability is against the natural deployment of the system and its
organisations. The concepts of Turbulence, chaos theory and economical dynamics describe the uncertainty of the economical system. The lesson to learn refers to the assimilation of the principle of uncertainty. It is useless to aim for certainty. Uncertainty is a natural inherent property of the economical system.

There is just one global market and it is highly interconnected. ICT has accelerated the effects of the interconnectivity, but this characteristic is natural and necessary for the existence of system. The market economy is better described as organisations economy. The relations between the organisations are more important that the organisations. The 2007 crisis proves the existence of interconnectivity. This is also an inherent characteristic of the system. The lesson is to understand that the actions on parts of the system have consequences in the whole system.

Productivity, instability and interconnectivity are management principles. These are in the literature for decades. They are still valid even after the crises. The basic knowledge of any business student should include these principles. They must be aware that good times shall not length forever. The best option to be prepared for the next crisis is understand it uncertainty. The path is endless, stability is undesirable. The economical system is in constant movement. Obstacles are challenged but others will come. The clear understanding of the turbulent, unstable and interconnecting environment is the basic knowledge for those future managers in order to conduct the world to prosperity.
References


Contact
Felipe Martinez
Department of Management (KM)
Faculty of Business Administration (FPH)
University of Economics in Prague (VŠE)
nám. W. Churchilla 4
130 67 Praha 3
felipe.martinez@vse.cz