

# Increasing the number of business relationships as a way to overcome the modern entropy of environmental barriers

*Dmitry Danilov*<sup>1\*</sup>

<sup>1</sup>RUDN University, Miklukho-Maklaya str. 6, 117198, Moscow, Russia

**Abstract.** For efficient business functioning, the organisation's management needs to adopt and approve the organisation's strategy based on the ability to reduce or completely bypass possible risks associated with the influence of the external environment. The development of technology has facilitated the emergence of completely new business models that have seriously simplified the consumption process by reducing the time it takes to transfer goods from multiple sellers to the customer. But from the point of view of organisations specialising in a narrow segment of goods the situation can be more complex, because with the simplification of communication there are many competitors within one site, the strategic behaviour of a limited number of competitors can be calculated with the help of existing mathematical models or with the help of game theory, but when there are so many competitors that we cannot identify them all, one of the most difficult types of uncertainty appears - the uncertainty of ignorance. The solution to this problem is to increase the interconnectedness in the different fields of action of the organisation. By increasing the interconnections, namely their number, firstly, there is an opportunity to expand the activities of the organisation in several subsystems, thus allowing diversification of risks, and secondly, we acquire a large number of stakeholders in different subsystems, who will be interested in the long-term retention of the organisation at a sufficient level of efficiency. It is the increased interconnectedness that contributes to the necessary sustainability in the strategic perspective, as well as compensating and distributing the growing external uncertainty between the activities in the different subsystems.

## 1 Introduction

For effective functioning of a business, the organisation's management needs to adopt and approve the organisation's strategy based on the ability to reduce or completely bypass possible risks associated with the influence of the external environment. Whereas previously business built its strategy based on flexibility, thereby avoiding a number of risks, now there are so many risks that their impact on the organisation is not only impossible to predict, but also impossible to determine. The concept of uniqueness of the offered product, proposed by

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\* Corresponding author: [dimaqwerty99@gmail.com](mailto:dimaqwerty99@gmail.com)

René Mobern in the "blue ocean strategy", is not a sufficiently effective concept of survival in the market nowadays, as the ubiquitous growth of information and analogues, and the most uncertainty of consumer preferences, does not allow to strategically fix the organisation on the necessary level of stability from external factors, this article proposes the opposite approach, based not on the narrowing of the relationship, but on the widest possible spread of it. Modern conditions of uncertainty give birth to many barriers that cannot be calculated with the necessary accuracy required for business decision making. One of the main reasons for the emergence and complication of modern business conditions is the multitude of interrelated factors of different nature. It is the interconnection of external factors that gives birth to potentially previously unknown barriers contributes to their further entropy and complication of forecasting the external environment. This article considers the justification of increasing technological, social, economic interconnections of the organisation as one of the effective ways to overcome the growing entropy of barriers of the external environment.

## **2 Materials and methods**

To justify the use of the strategy of increasing interconnections as a way to overcome uncertainty, we used theoretical methods such as the system approach, analysis, experimental methods such as comparison, observation, description. This set of methods helps to solve the following tasks: to determine the nature of economic change, to assess the existing uncertainty in the context of the growing dynamics of changes in the external environment, to substantiate the need to use the tactical increase in interconnections in the construction of the organisation's strategy [1-10]. To substantiate the growing entropy as an indicator of uncertainty, the method of comparative analysis was used, it contributed to the visualisation of the difference of data accumulation for certain periods, thus confirming the current, the highest level of uncertainty in the external environment.

## **3 Results**

Strategic management should form a well-founded strategy of the company, increasing its economic efficiency, competitive advantages, and make it possible to competently and purposefully change the tools used in accordance with the changing conditions of the external world. For example, such exogenous parameters as the uncertainty of the economic system caused by economic and financial crises such as the global financial crisis can adjust the behaviour of the firm, so when planning further development in the market, it is necessary to take these parameters into account. The possibilities of strategic management are not unlimited, there are a number of limitations on the use of strategic management, which indicate that strategic management, like tactical management, is not universal. Strategic management by its very nature does not and cannot give an accurate and detailed picture of the future.

In modern conditions, strategic management of an organisation cannot be reduced to a set of routine rules, procedures and schemes. Strategic management is rather a certain philosophy or ideology of business and management. It takes a lot of effort and a lot of time and resources to start the process of strategic management in an organisation. Services that control the environment and incorporate the organisation into the environment need to be established. The need to determine the current strategic position in the market is due to the dramatic increase in the risks of negative strategic foresight. Strategic management often focuses on strategic planning and this is totally inadequate as the strategic plan does not necessarily ensure its successful implementation. In fact, the most important component of strategic management is the implementation of the strategic plan. And this implies, first of all, the

creation of an organisational culture that allows the implementation of the strategy, the creation of motivation and organisation systems.

These actions do not make sense unless there is a clear understanding of all the determinants affecting the organisation, and it is quite natural that in today's conditions of high uncertainty, determining all the determinants is an extremely difficult, if not impossible, process. In order to understand how and why uncertainty is the most important challenge of modern management, it is necessary to look at this problem from the time when it first started to be thought about and try to consider the essence of the definition of uncertainty in the business environment. The main reason for uncertainty is that current trends have no analogue in the past and it is difficult to determine what effect they will have and whether they will have any effect at all.

Since quantitative assessment of determinants as elements of interrelationships that create new barriers is impossible without accumulated managerial experience, their assessment may seem unsuitable for building strategic actions on its basis, nevertheless it is necessary, because when even negative results of decisions made on the basis of this assessment are accumulated, further assessment of determinants in future periods will be based on the existing experience, albeit minimal. With a new assessment of the influence of determinants, when such sufficient and necessary experience is achieved, the accuracy of the assessment will increase, which will reduce the level of uncertainty. But what to do when the assessment of determinants is impossible, when we cannot identify the forces that can influence the behaviour of the environment (competitors, political factors, technological factors, social factors) in which the organisation operates - all this only increases uncertainty. The existing uncertainty has a much more complex origin, namely, factors and many sub-factors, interacting with each other, generate entropy, in which there are situations that carry maximum risks (often they are global). The existence of such non-calculable risks was described by the American risk manager Nassim Taleb, but their origin is still being studied. It is the interaction of sub-factors in the modern environment, characterised by the properties of a super-system, that is one of the causes of growing entropy. Let us consider the factors and modern sub-factors that have been identified so far and that are among the most driving indicators of entropy uncertainty.

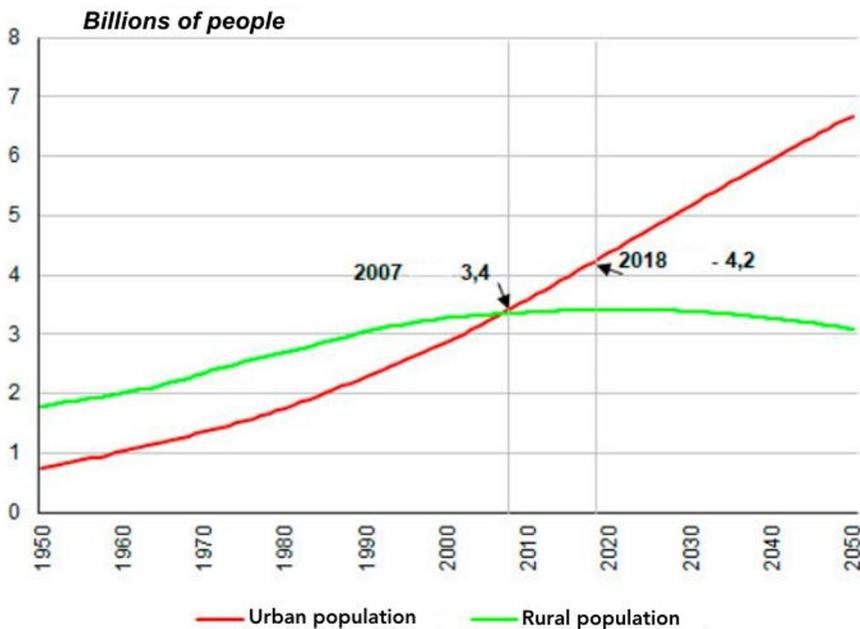
The technology factor has a significant impact on modern business. With the development of new technologies, new business opportunities arise, including opportunities to reduce production costs, increase operational efficiency, and improve product quality. Examples of technological changes that affect modern business. The Internet has become an integral part of modern business and provides companies with the ability to conduct more effective marketing activities, improve communications with customers and employees, and automate business processes. Big data is the vast amounts of information that can be collected and analysed by companies. This data can be used to improve products, increase operational efficiency, and improve marketing strategies. Artificial Intelligence is used by companies to automate production processes, improve productivity, analyse data and improve predictive accuracy.

Robotics can be used to automate manufacturing processes and improve productivity. Robots can perform many different tasks and help companies reduce costs and improve product quality. The Internet of Things is a network of devices that can communicate with each other. These devices can be used to gather information about manufacturing processes, improve inventory management, and increase operational efficiency.

Social norms and values change: Social norms and values can change over time, which can lead to changes in consumer preferences, attitudes and other areas of life. For example, people in many countries are now increasingly focused on environmental issues and environmentally friendly products. Consideration of the social aspect in modern management (both in strategy building and positioning) clearly shows that the social aspect in the context

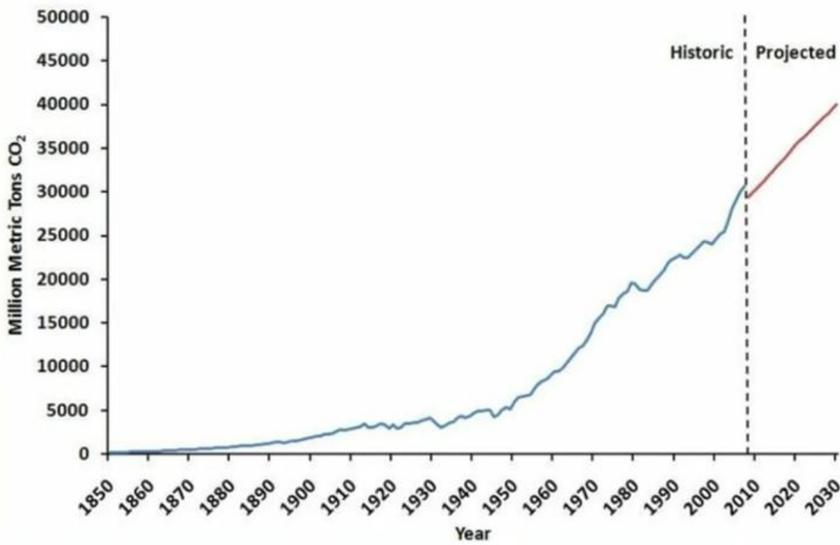
of consumer is not always an independent factor, but comes from the influence of other, no less important factors, such as ecology, technology, economy, regional features of culture and the correlation of "micro-regional" culture with "macro-regional" culture. Demographic change: changes in population demographics such as age, gender and nationality can affect demand for goods and services, as well as production capacity and market opportunities. Changes in government policy and regulation: changes in legal and regulatory requirements can affect the production and sale of goods and services, as well as how companies interact with each other and with government agencies.

The growth of urbanisation has generated a lot of research on the level of environmentalism and how to deal with it, and has given the trend of environmentalism a new impetus. Let's look at the level of urbanisation in the world since the 1950s (fig.1).



**Fig.1.** Dynamics of urban and rural population (Source: United Nations, Department of Economic and Social Affairs, Population Division)

As early as 2007, the number of urban dwellers equalled the number of rural dwellers, a trend that continues to increase. According to the forecasts of Stephen Griffiths, Vice President for Research at Khalifa University and Science, the share of urban population will increase to 70 per cent by 2050. With the growth of urbanisation comes the threat of environmental pollution, for example, one of the key topics of the World Economic Forum is pollution control. Let us consider the global dynamics of CO<sub>2</sub> emissions into the atmosphere.



**Fig.2.** Increase in CO2 emissions over the period (Source: Center for Climate and Energy Solutions)

Urbanisation has huge economic benefits, reducing urbanisation is not the key topic of discussion at the moment, the discussion of reducing environmental pollution is more important.

The tendency of politicians and the public to oppose pollution is leading to increased requirements for the emission of harmful substances into the environment, as urbanisation continues to grow, so will pollution, and therefore pollution control measures will improve and become more and more prominent in national legislation.

Another equally important challenge in strategically dealing with uncertainty is to consider that the current economy is smoothly transitioning into an 'interconnected' economy. More and more organisations are opting for a platform business model. The platform business model is outperforming linear businesses in terms of value, for example, in Asia, 31 out of 36 "unicorn" companies are platforms.

In the S & P 500 list, pure platform companies, or companies for which the platform business model is the core business model, generate the most revenue. In contrast, linear businesses are valued at an average of two to four times revenue, depending on their business model. However, the trend in the number of small companies and the almost constant number of large companies suggests that through interconnectivity, small companies can compete with large organisations by reducing costs. The operation of small companies through an established platform company reduces both the number of small company processes and the cost of delivering goods to the end consumer, so that the goods of small producers are able to withstand the commodity competition of the goods of large producers. The strategically favourable position of business in the modern economy is provided by the number of interconnections formed, and the prospects for further growth in the number of interconnections. Hence, we see that it is the strategic increase of interconnection that is one of the effective ways to overcome the entropy of the external environment.

## 4 Conclusion

Modern business environment is not static; on the contrary, its dynamics are now at the peak

of the rate of change and is complicated by the fact that the growth of technology, accumulated data and social disruption will only exacerbate the situation, making entropy grow on a large scale and embracing all new environmental factors. The uniqueness of the organisation, which was taken as the basis of the strategy until 2018-2020, is no longer a sufficient justification for the future stability of the organisation, we see that the fastest growing organisations in the developing world are catching up with S&P500 organisations and their business model is often platform-based, i.e., one that accumulates a multitude of actors both offering and using services, i.e., it is a kind of node with many interconnections from both consumer sides. But will the models with multiple interconnections become fundamental in the strategies of organisations? This question can only be answered with a degree of probability, but as is the case with uncertainty-a retrospective look will prove to be obvious, though unknown at the present time.

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