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### Articles and Statements

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#### Development of the Asia-Pacific Region: Current Economic Position and Perspective of Information Society

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#### Abstract

The article examines the problems of current economic development in the Asia-Pacific region. It is a condition of the system in which its key parameters are the optimal ratio contributing to the existence and development of the whole system. It was analyzed the changing situation in the Asia-Pacific region based on the main characteristics of the researching complex according to the authors' calculated index. It was identified that in the analyzing period the quantitative and qualitative structure of the group of countries has completely changed. It was also provided the classification of the Asia-Pacific countries based on the current level of their economic development. Thus, because of the differences in the economic dynamics it was identified the main differences in the levels of economic development among the groups of the Asia-Pacific countries. This analysis was conducted for identification of the competitive advantages of the information society in the Asia-Pacific region, as the development of a new society based on "knowledge economy" which will be a priority for a long-term perspective.

**Keywords:** Asia-Pacific region, clustering of the Asia-Pacific countries, balanced development, information society

## 1. Introduction

The cooperation of the countries in the Asia-Pacific Region (APR) has become an important factor in the economic development of the modern stage of the world economy. Nowadays, a variety of indicators' combinations of the economic development in different countries does not provide the ability to assess the level of economic development from only one side of researching activity. Each stage of the development of the national economy and the world economy as a whole is making certain changes in a range of the main indicators. In this connection, the research of the current situation of economic development of the Asia-Pacific region has a special importance and relevance.

A lot of modern foreign and Russian researchers focused on the problems of the assessment of the economic development. Modern processes of globalization, and increased competition between countries have some differentiation problems and contradictions in the social and economic development.

Nowadays, there are a lot of researches about the problems of economic growth. Obviously, the results of economic growth contribute to improve the quality of human life. A lot of economists interpret the economic growth as the development. It should also be noted that one of the elements of development is the level of balanced development of the economy. Firstly, it is important to determine the relationship between the concepts of "economic growth" and "economic development". The economic development is a qualitative change in the structure of the economy, which leads to the increase of welfare. Economic growth is a positive change in the quantitative results of the functioning of the economy, it is measured by the volume of production of goods and services (GDP) per capita. Economic development can be accompanied by economic growth, and can be taken place on the background of economic stagnation.

If we speak about the national priorities of government regulation of world economies, firstly, it should be mentioned the stabilization of economic growth and elaboration of balanced macroeconomic policy for the future economic development.

The most important goal of every country is to ensure a balance between economic efficiency and social justice. This balance is a required condition for sustainable and balanced economic development.

In the post-industrial period the economic and social development has entered in a qualitatively new phase of development, which called "information society". Information society is a society based on the widespread distribution of information and communication technologies (ICT), with a dynamic economy and high levels of per capita income, level of education and health, aimed at innovative development, international competitiveness and prosperity of the country.

Creation and development of the information society within the national framework is accompanied by the formation of a global information space and "retraction" in this global process, not only the most developed, but also developing countries. This process generally contributes to innovative development and competitiveness of the national economy, but it also has negative effects. That is why the process of creation of the information society needs to be regulated by the government for stimulating the positive effects and reducing the negative effects.

The identification of "best practice" strategies and tools of economic growth and international competitiveness based on the development of the information society involves determining the number of countries, whose experience has a theoretical and practical significance.

## 2. Methods

It is used the author's method of estimating the economic development of the Asia-Pacific region which is based on the calculation of the integral index. Based on the mathematical, econometrics and multivariate statistical analysis methods it was provided the classification of the Asia-Pacific countries according to the degree of the balance of their economic development.

## 3. Results

It was provided the estimation of the level of economic balance in the Asia-Pacific countries. The distribution of the countries in 2012 based on the calculations are presented in Table 1.

**Table 1.** The classification of the Asia-Pacific countries based on calculations of the balance of economic development, 2012

<b>Level of economic balance</b>	<b>2012</b>
Absolutely balanced level of development	–
Balanced level of development	Australia, Brunei, Canada, China, Malaysia, New Zealand, Russia, Singapore, USA, Thailand, Chile, South Korea, Japan
Medium balanced level of development	Peru, Salvador, Samoa, Solomon Islands, Tonga, Fiji, Philippines, Ecuador, Vietnam, Guatemala, Honduras, Hong Kong, Indonesia, Cambodia, Colombia, Costa Rica, Macao, Mexico, Mongolia, Nicaragua, Papua New Guinea,
Low balanced level of development	Vanuatu, Marshall Islands, Micronesia, Nauru, Palau, Panama, Timor-Leste, Tuvalu

Source: the authors' calculations

There is more detail classification of the Asia-Pacific countries according to the average, low and high levels of economic balance of the economy (Table 2).

**Table 2.** The characteristics of the calculated integral index of the Asia-Pacific region, 2012

<b>Level of economic balance</b>	<b>2012</b>		
	<b>Average</b>	<b>Low</b>	<b>High</b>
Balanced level of development	13 countries (30.23 % of total number)		
	0,560	0,502 Chile	0,641 S. Korea
Medium balanced level of development	21 countries (48.84 % total number)		
	0,390	0,281 Vietnam	0,492 Philippines
Low balanced level of development	9 countries (20.93 % total number)		
	0,115	0,044 Marshall Islands	0,213 Timor-Leste

Source: the authors' calculations

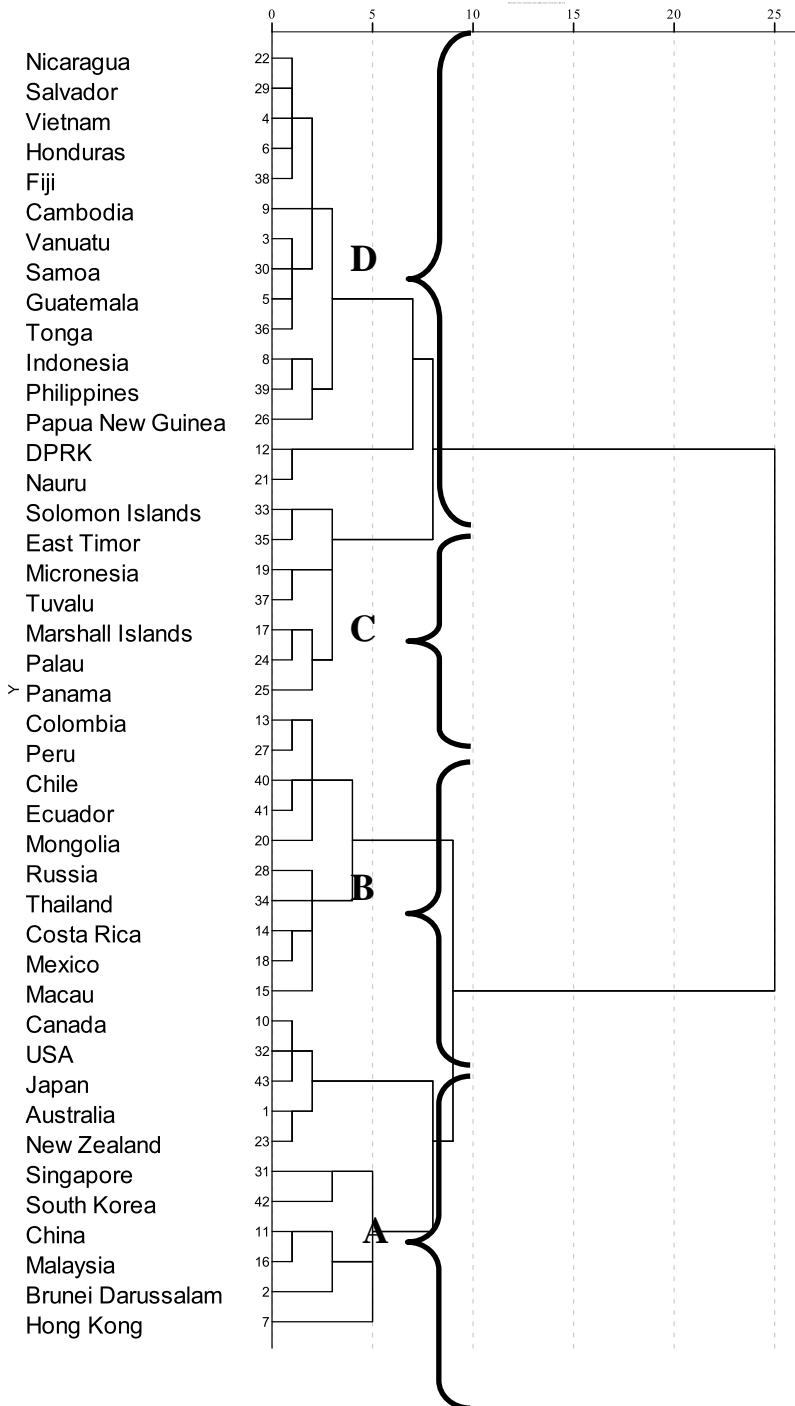
The characteristic feature of the modern world economy is a growing irregularity of the socio-economic development of the countries. The process of economic differentiation has intensified in the 1980-1990. It develops in different directions, for instance, levels of economic development, national economic structures, situation in the world economy.

The irregularity of social and economic development partly inherited from the colonial period of historical development. The expansion of industrial production in the metropolitan countries with insufficient provision of some of these mineral resources has stimulated the development of mining industries in the colonies.

Thus, based on the differences in the economic dynamics it was identified the major differences in levels of economic development among the groups of countries and regions. If in the western highly developed countries the differences of the levels of per capita income were declined over the past half century, but in developing world it rapidly increased.

The changing of the economic situation of some countries (groups of countries) is determined by a variety of factors and conditions. It is the differences in the scale of the national economy, empowerment of mineral resources, the approaches to the implementation of development strategies, in the terms of international trade, the demographic situation, and the external debts.

The countries have developed in a variety of ways, using different models of economic development. The high growth rates were achieved due to the high rate of accumulation, the usage of modern technology, and the high productivity. These functions are carried out with a combination of market initiatives, government regulation and entrepreneurship. Due to the high differentiation of socio-economic development of the Asia-Pacific region, particular importance has the research and classification of countries according to the degree of the balance of economic development.



**Fig. 1.** The hierarchical cluster analysis of the Asia-Pacific countries on the basis of economic and social balanced development, 2012  
 Source: the authors' calculations

In this research it was used a multi-dimensional classification of data - a cluster analysis. The cluster analysis is a multivariate statistical procedure, which provide opportunities to collect data, containing information about the objects, and then organize the objects in a relatively homogeneous group. Nowadays, there are about 100 different clustering algorithms, but a hierarchical cluster analysis is the most useful for the purpose of this research.

The result of hierarchical cluster analysis is the construction of dendograms. It describes the proximity of the clusters to each other, it is a graphic sequence of association or the separation of clusters and a nested grouping of objects which change at different levels of the hierarchy. The results of the classification in 2012 are shown below as a dendogram, where the vertical axis represents the observation, and the horizontal axis is the distance between the objects of observation (Figure 1).

In 2012, there are 11 countries (26 % of the total number) of the Asia-Pacific region in the *Cluster A*. In this cluster it was marked the highest rates of innovation activity, potential of resource and raw materials and level of production, demography and health.

*Cluster B* includes 10 countries (23 % of the total number) of the Asia-Pacific region. For this cluster we identified the high grouping indicators which characterize the investment climate and education. *Cluster B* has the best values of the considered parameters of Cluster C and D. It was observed a positive trend in almost all indicators (except financial capacity) measuring the degree of balance between economic development of countries.

*Cluster D*, which in 2012 included 15 countries (35 % of the total number) of the Asia-Pacific region, is determined by the lowest values of the investment climate, financial capacity, health and education indicators.

Based on the results of our research it was concluded that in the Asia-Pacific region there is a high differentiation in terms of the balanced economic development. A sufficiently large number of countries are not attractive in investment sphere, with a low level of resource and financial potentials, and thus, it effects on the social problems which related to such important spheres as education and health service.

In addition, it was identified the competitive advantages of the Asia-Pacific countries: Hong Kong (leadership in the region in commerce, finance, trade and shipping), South Korea (a leader in the export of labor-intensive goods, the amount of input and technology of ship construction, automobile manufacturing), Singapore (best place in the world for business for small and medium-form; a major global banking, financial and commercial center, the most efficient in the world functioning of institutions, high standard of living and a high legal security and low taxes), Japan (high quality of public service; high level of effective demand, high level of education, the world highest relative measures of spending on science, the most powerful banks, global economic and technological leader), Australia (the world leader in the manufacture and export a range of products and services, including electricity production per capita).

The specific nature of the competitive advantages which created in the process of creating the Information Society (Castells, Manuel-Himanen, Pekka, 2002; Dakhli, M., De Clercq, D., 2004), was provided by some main characteristics: firstly, on the basis of superiority in the human, social equity and the conversion of knowledge into advanced innovations; and, secondly, a stable long-term benefits, due to the nature of the phenomenon of innovation. This specificity is determined the increasing role of open innovation and the creation of competitive advantages based on the ability of the country to make a profit and improve its business as a result of research and scientific-technical cooperation.

The competitiveness of the country, which develop the information society, can be identified as the ability of the country to achieve sustainable economic growth and be in advance of other countries in terms of the socio-economic development, which created on the basis of strategies and mechanisms for construction and development of the information society.

Based on the researching data and results of dendogram it was analyzed the level of conversion of the Asia-Pacific region into the information society (Table 3).

In addition, there is one useful index for measuring the information society development in the regions. It is ICT Development Index, IDI, which is calculated by experts of the International Telecommunication Union (ITU, ITU).

**Table 3.** The rating of the Asia-Pacific countries on the basis of Index IDI

Country	Total rating			
	2010	2011	2012	2013
Australia	14	21	11	12
Hong Kong	6	11	10	9
Singapore	19	12	15	16
South Korea	1	1	1	1
Japan	13	8	12	11
USA	17	15	17	14
Russia	47	38	40	42

Source: The Global Competitiveness Report 2014-2015. The World Economic Forum 2015

The ICT Development Index (IDI) is a composite index combining 11 indicators into one benchmark measure that serves to compare developments in information and communication technology (ICT) across countries. The main objectives of the IDI are to measure: the level and evolution over time of ICT developments in countries and relative to other countries; progress in ICT development in both developed and developing countries; the index should be global and reflect changes taking place in countries at different levels of ICT development; the digital divide, i.e. differences between countries with different levels of ICT development; the development potential of ICTs or the extent to which countries can make use of ICTs to enhance growth and development, based on available capabilities and skills (Methodology Report on European Innovation Scoreboard, 2005; Measuring the Information Society, 2013).

The world leader of creation the information society in the Asia-Pacific region is South Korea. The growing trend is characterized by the creation of the information society in Singapore and Japan, although in 2013 the development of the information society in these countries was slowed. Hong Kong is also characterized by reduced positions in the sphere of the information society, but it is still among the top ten countries based on the indicators. Australia has increased position of this indicator. It is due to the governmental task to overcome the lag in the development of the information society, in which the solutions are implemented of the smart technology, improved broadband infrastructure, a growing number of households to the Internet. The US position probably didn't changed. Russia shows a low improvement in this position, but it is far away from the developed countries of the Asia-Pacific region.

#### 4. Discussion

For this research it is significant aspects of the application theories of international economic development. In the middle of the XX century a significant contribution in the research of this issue was made by French economist M. Byeau, who published in 1950 his article "The Customs Union and the national interests" (Byeau, 1950), and US international trade theorist J. Viner, one of the founders of the theory of customs unions, he published the book "The consequences of the customs union". J. Viner has shown that the presence of trade and other national economic barriers has led to a crisis in the international economy and politics, to the inefficient usage of resources in a closed economic space that can be overcome through the establishment of alliances to ensure the free economic exchange. Both of these publications have initiated a number of investigations of economic effects of free trade areas and customs unions.

Thus, J. Viner (Viner, 1950) firstly formulated the condition of trade-creation and trade-diversion effects of combining two or more of the national markets into a customs union, contributes both to the resultant of GDP growth and well-being in all member countries of such integration group. According to his opinion the removal of barriers increase the gains from trade in the case if the imports from the partner country replaces less efficient domestic suppliers, resulting in the effect of creation.

R. Lipsi (1957) and I. Bogati (1997) (Lipsi, 1957, Bhagwati, 1997) have shown that in some cases the result of a customs union, which is dominated by trade-diversion effects may increase welfare of the nation.

P.Krugman considered that the countries of the regional trading blocs, are so-called "natural partners", with the result that they are more likely to have benefits from participation in this agreement and their winnings will be as higher as their share in the domestic regional market (Krugman, 1989).

E. Moravcsik outlined that national countries remain key actors in the process of integration, and he considered that it is necessary to draw a distinction between "formal" and "informal" integration (Moravcsik, 1992).

It is obviously that the value of informal integration is enormous. Inter-governmental cooperation is just a reaction to the necessity of society and market economy. However, the primary one in the integration process is a formal integration.

The effective social and economic development of the Asia-Pacific region can be successfully carried out as a result of the integration of the countries into a single socio-economic space. Each country actively developed the concept and the program of socio-economic development, however, cannot be claimed about the presence of a comprehensive tools for the policy implementing which relating to the balanced development of the country.

The researches about the information society began in the middle of the XX century in the frameworks of the theory of post-industrial society. The theorists of post-industrial society D.Bell (D. Bell, 1980), Z. Brzezinski (Z. Brzezinski), J. Galbraith (J. Galbraith), P. Drucker (P. Drucker), A.Toffler (A.Toffler, 1980), A. Touraine (A. Touraine), D. Riesman (D. Riesman), T. Forester (T. Forester) and others almost fifty years ago had forecasts about the transformation period of the developed countries to a new type of production on the basis of new computer technologies.

There is a huge selection of the definition of Information Society. The most disputable concept is identified as follows: "A society that organizes itself around knowledge in the interest of social control, and the management of innovation and change" (D. Bell, 1980).

The ideas of the new industrial society (J. Galbraith) and the post-industrial society (D. Riesman, D. Bell) was gradually modified in the concept of the information society, the development of this idea was continued in the researches of U. Dayzarad, E. Masuda, M. Haydeger, K. Errou, Zh. Ellyul, Karl Jaspers, A. Norman, M. Konnarz, G. Benesko, T. Morris-Sasuke, F. Machlup, J. Stigler, M. Porat, M. Castells and others.

However, the process of formation and development of the information society have not been completely investigated yet. The low level of investigation of the problems this area have noted by I.A. Strelez and S.V. Parinov, who developed the concept and theoretical model of a network economy, A.N. Avdulov and A.M. Kulkin, who considered various aspects of socio-economic development.

Although, there is a large number of Russian and foreign researches of the issues of competitiveness, but in the domestic economic literature it has not developed a holistic view of the completed formation of competitive advantages of the country in conditions of deepening globalization and the information society.

## 5. Conclusion

The proposed approach of this research for the definition of the priorities of countries for ensuring their balanced economic development of the regional market is composed of two parts: firstly, based on the authors' method it is calculated the integral indicator of the balance of economic development of the country, and secondly, the results are complemented by the analysis of the degree of development of information society in the Asia-Pacific region.

Thus, the Asia-Pacific region countries, such as Australia, Singapore, South Korea, Japan, Hong Kong and Taiwan, have made great success in creation of the information society and recognized by the international community as the most competitive economy in the region of East Asia. These countries demonstrate a steady growth of development even in the period of the negative global economic situation. The priorities of the development were shifted from the objectives of improving the global competitiveness of key manufacturing sectors to the challenges of sustainability of development.

The deep inclusion in the information revolution and the focus on the formation of the information society had the influence to the Asia-Pacific region countries for achievement of the high levels of positive dynamics of growth of per capita income and quality of life. The highest correlation between the index of the information society (IDI) and the level of per capita income

achieved in South Korea. It means that the process of construction of the information society in South Korea affects the increase in per capita income in the country.

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**Развитие Азиатско-Тихоокеанского региона: современное экономическое положение и перспективы информационного общества**<sup>1</sup> Наталия Викторовна Кузнецова<sup>2</sup> Екатерина Викторовна Кочева<sup>3</sup> Николай Анатольевич Матев<sup>4</sup> Наталья Александровна Воробьева

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**Аннотация.** В работе проводится анализ современного экономического развития Азиатско-Тихоокеанского региона, которое характеризуется определенным состоянием системы, где ее ключевые параметры имеют оптимальное соотношение для планомерного развития всей системы. В исследовании проведена оценка изменяющейся ситуации в Азиатско-Тихоокеанском регионе по основным характеристикам изучаемой совокупности согласно предлагаемой методике. Выявлено, что за исследуемый период количественный и качественный состав групп стран существенно изменился. Работа дополнена классификацией стран Азиатско-Тихоокеанского региона по показателям, характеризующим уровень их текущего экономического развития. В результате различий в экономической динамике обозначились крупные различия в уровне экономического развития среди групп стран рассматриваемого региона. Данный анализ проведен для выявления конкурентных преимуществ информационного общества Азиатско-Тихоокеанского региона, так как именно развитие нового общества, построенного на "экономике знаний", является приоритетным на долгосрочную перспективу.

**Ключевые слова:** Азиатско-Тихоокеанский регион, кластеризация стран Азиатско-Тихоокеанского региона, сбалансированное развитие, информационное общество.