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Inter-cities Relationships in the Process of “Global Economy’ Urbanization”

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Author’s contribution

This whole work was carried out by the author DU.

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ABSTRACT

Cities play a key role in the modern global economy. They became full-fledged (together with states, multinational corporations and international economic organizations) subjects of international economy relationships; concentrated financial and commodity markets, enormous productive and innovative potential of humanity. Due to these institutional and infrastructural transformations now we can consider a gradual process of “global economy’ urbanization” (term was offered by author) – concentration of global economical relationships, activities and power within a global net of cities.

The main reasons of transformation of economic importance of cities are their advantages in comparison with State economic systems.

Labor and capital in urban economy systems is more mobile and productive; cities are more predisposed to create and commercialize innovations. Moreover, cities are easier to connect with international markets and world trade, are able to reduce transport costs, to increase own investment attractiveness, and to rapidly form new types of business activities and forms of manufacturing organization.

This study analyzes a current system of global cities, an intensity of inter-cities relationships, a potential of global urban system transformations in a future. Original methodology of inter-cities economic collaboration’ evaluation allowed to classify modern urban economies for few types depends on their role and meaning in globalizing economy. Further interactions within a global cities hierarchy (including inter-cities competitions, inter-cities consumption and labor division and so on) will mostly identify trends and patterns of the world economy development in the nearest future. Some

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authors' conclusions and forecasts about modern and future stages of global cities' hierarchy formation are also offered in this study.

Keywords: Globalization; urban economy; global city; transnationalization; networking of economy; external competitiveness.

1. INTRODUCTION

Change of economic role of the cities, stimulated by globalization, transforms a structure and content of international economic relations. Now global cities can be considered as most important participants of international economic relationships. Cities are closing within own network worldwide production and distribution system, are determining a countries' positioning in the structure of international division of labor, are shaping conditions for international competition and further progress of the world economy [1,2].

An intensification of interdependence of economic indicators of particular countries on the functioning of the global cities network, as well as need to increase theoretical and practical bases for effective national urban economic systems creation and development have identified a relevance of this research.

The purpose of the study is to determine an intensity of economic interactions between the cities within their global network and to classify global cities in dependence on their position in global economic hierarchy and role in international economic relationship.

Objectives of the study are analyze economic interactions between urban and national economic systems; identifying the role of global cities in world economy networking; conditions of formation, principles of functioning of global cities' network and possible consequences of its development; analyze interactions between the cities within a global system of urban economies, assessing of its dynamics and intensity; identifying types of urban economies depending on city's positioning in the global hierarchy, and abilities of this hierarchy transformation in the dynamic of world economy.

Hypothesis of the study is based on supposition that development of global cities network is an important factor for world economy networking and transnationalisation, transformation of central world market institutions such as international competition, trade, division of labor. At the same time, role of the city in world economy, its competences in transnational production and distribution are determined by number of urban economic competitive advantages, structure of city's interactions with States, international economic institutions, and representatives of transnational entrepreneurship.

2. GLOBAL CITIES' ECONOMIC INTEGRATION: DYNAMIC AND INTENSITY

Attempts to consider a world economy as a network of interacting cities have made since the 1990's – time of global cities theorization.

An approach of GaWC expert group is one of the most prominent. This group analyzes interdependence between global cities networking and world economy transnationalization.

Manufacturers of high-end services form a core of global service industry, offer possibilities of “global service” for MNC’s and aggressively develop an international network of own offices, that still cannot be effectively replaced in the Internet.

Global cities are nodes of this network. This approach allows a formalization of concept of global three-level network: first is a level of the world economy, where services are offered; second level is represented by cities as effective focal points, where high-tech services are produced and third level is represented by business [3,4,5].

In this network system the cities are considering as points, where networks of global companies intersect. For identifying inter-urban linkages GaWC uses information about location of offices of 100 biggest multinational companies (that belong to six industrial and service sectors).

According to GaWC research most integrated into transnational network cities are concentrated in North America, Western Europe and East Asia.

At the same time a historical role of European cities reflects in a large number of centers that provide services and have varying degrees of own involvement into the global network [6]. In contrast, in East Asia only a few cities are integrated into the global network, but every one of them has a highest degree of this involvement. Outside of three dominant global regions (Europe, East Asia and USA) any highly integrated cities are not presented.

An original approach of Viltos F. and L. Verekken [7] to determine characteristics of the global cities’ network based on analysis of air passengers flows between them. Using statistic data from largest airports and airlines of the world (Fig. 1), they identified busiest airlines and structure of inter-regional passenger traffic (Table. 1).

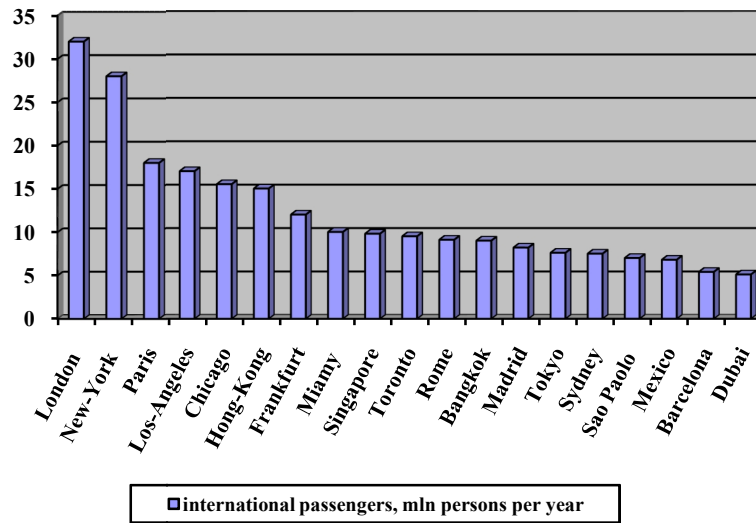


Fig. 1. Busiest airports in the world, 2005

Obtained data was visualized as a variant of global urban network. Overall, findings of Viltos F. and L. Verekken demonstrate a leadership of U.S. and European cities and rapid increasing of global impact of cities in Asia -Pacific region.

However, currently existing methods for determining the patterns of global urban network functioning are based on comparison of selected urban indicators without taking into account regional features of the cities and their relationships with own state.

Table 1. Busiest air routes in the world, 2005*

No	Pair of cities		Passengers, mln persons per year
1	Hong-Kong	Taipei	2,138
2	London	New-York	1,610
3	Melbourne	Sydney	1,563
4	Los-Angeles	New-York	1,534
5	Rome	Milan	1,533
6	Cape town	Johannesburg	1,406
7	Amsterdam	London	1,24
8	Chicago	New-York	1,160
9	Bangkok	Hong-Kong	1,141
10	London	Paris	1,070

* - data from Wilcox, F. & Verecken, L. [7]. Mapping the global network economy on the basis of air passenger transport flows

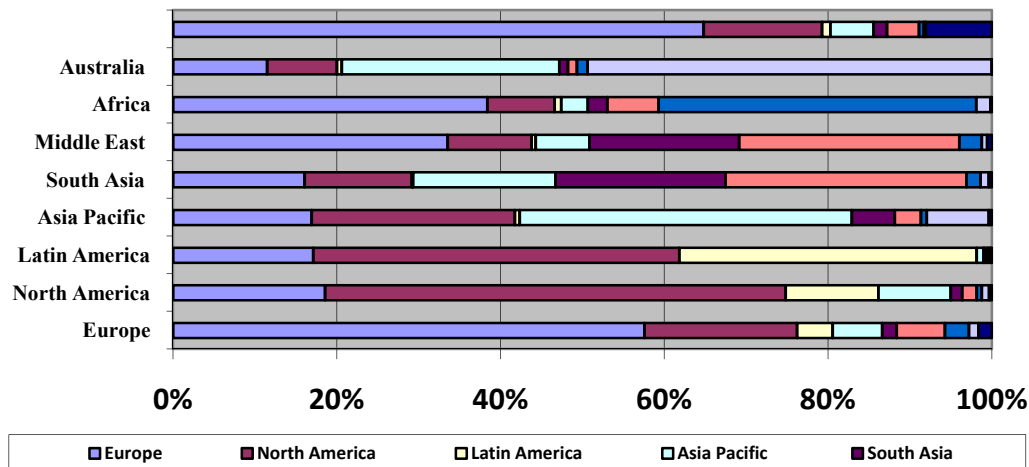


Fig. 2. Regional structure of air-passengers flows (share of each region in 2005, %)

As noted before, a definition of global cities network should be based on assessment of regional significance and importance of the city [8]. Further, analyzing a quality of interactions between the cities, we can identify city's opportunities to impact on the world economy progress and to be integrated in forming global urban network.

Within a study economic relationships between 33 largest cities in the world were analyzed and evaluated. In assessing following indicators were used:

- number of headquarters / branches of MNCs (data from "Forbes-2012"/ www.forbes.com/researches.html);

- number of national companies branches in partner city (data from “Forbes-2012”/ www.forbes.com/researches.html);
- number of national financial MNCs based in the city, and number of their branches in a partner-city (data from “Forbes-2012” (TOP-500 companies in the world, 2012);
- urban export destined to partner city (data from web sites of the cities (urban commercial departments), 2012);
- urban imports from partner-city (Data from web sites of the cities (urban commercial departments), 2012);
- investments from / to partner city;
- number of seats on flights between a couple of cities in a day [7];
- number and amount of money transfers of local residents and corporations to / from partner city per year (data from web sites of the cities (urban commercial departments), 2012);
- number of students from the partner city in largest local university (Data from Pricewaterhouse Coopers, 2012);
- number of applications for extension a working / migration visas by residents of the partner city per year (Data from Pricewaterhouse Coopers, 2012);
- daily Internet traffic between the pair of cities (Data from annual report by Microsoft, 2012);
- number of tourists arriving from the partner city per year [9];
- existing programs for development of partnerships between couple of cities and their quality [10];
- existing preferences and special regimes for the development of business relations with the city – partner [11];
- state of information environment of economic relations between the partner cities (number of partner-city’s references on city official web-site (calculated by authors).

Assessment of interdependence of major cities of the world was made by 12- points’ scale (12 points were given to the maximum value of each indicator). The results are shown in Table. 2.

As can be seen from the Table. 2, maximum intensity of correlation is observed in pairs London and New-York (absolute maximum), Hong- Kong and New-York, Hong-Kong and London, New-York and Los-Angeles.

Minimum intensity of relationships is built between geographically dispersed regional centers, such as Berlin and Shanghai, Osaka and Barcelona. Based on these data we can make a table showing five most important partner cities for modern urban development (Table. 3).

Based on the data from Table. 3 we can rank the cities of the world by diversification of their international relations (Table. 4).

Table 2. Evaluation of Intensity of the modern inter-cities relationships*

Cities	Bangkok	Barcelona	Berlin	Buenos-Aires	Hong-Kong	Jakarta	Johannesburg	Kuala - Lumpur	London	Los-Angeles	Madrid	Manila	Melbourne	Mexico	Milan	Moscow	New-York	Osaka	Paris	Beijing	Rome	San - Paulu	Seoul	Sydney	Singapore	Istanbul	Tokyo	Frankfurt
Barcelona	4																											
Berlin	2	3																										
Buenos-Aires	5	4	2																									
Hong-Kong	8	5	3	7																								
Jakarta	6	4	2	5	7																							
Johannesburg	4	3	2	4	6	4																						
Kuala - Lumpur	5	4	2	4	6	5	4																					
London	8	7	4	8	11	8	7	7																				
Los-Angeles	6	4	2	5	8	5	5	5	10																			
Madrid	6	6	3	6	8	6	5	5	9	6																		
Manila	5	4	2	5	6	5	4	4	7	5	6																	
Melbourne	5	4	3	5	6	5	4	4	8	5	6	5																
Mexico	6	5	2	6	8	6	5	4	8	6	7	5	5															
Milan	6	6	3	6	8	6	5	5	9	6	8	5	6	7														
Moscow	5	5	3	5	8	5	4	4	9	6	6	4	5	5	7													
New-York	8	6	4	8	11	8	7	7	12	11	9	7	7	8	9	10												
Osaka	2	2	2	2	3	2	2	2	4	2	3	2	2	2	2	2	3											
Paris	8	6	4	7	9	7	6	6	11	8	8	6	6	8	8	8	9	3										
Beijing	5	4	2	4	7	5	4	4	8	6	6	4	4	4	6	4	8	2	7									
Rome	3	4	2	3	4	3	3	3	5	3	4	3	3	4	4	4	5	2	5	3								
San - Paulu	4	4	2	5	6	5	4	4	7	4	6	4	4	6	6	4	7	2	6	4	3							
Seoul	5	4	2	5	6	6	5	5	8	6	6	5	4	5	6	4	7	2	6	5	3	5						
Sydney	7	5	3	6	8	7	6	6	9	8	7	7	6	7	8	6	9	3	8	7	4	6	7					
Singapore	7	5	3	6	9	6	6	6	10	8	8	6	6	8	8	7	10	3	10	6	4	7	6	8				
Istanbul	4	3	2	3	5	4	4	3	7	5	4	3	3	4	4	4	6	2	6	3	2	4	4	5	5	5		
Tokyo	7	6	4	7	9	7	6	6	10	8	8	6	6	8	8	7	9	3	9	6	5	8	6	8	10	4	8	
Frankfurt	6	6	3	6	8	6	5	5	9	6	8	6	6	7	8	6	9	3	10	5	5	7	6	8	8	4	8	
Shanghai	4	3	1	3	5	4	4	4	6	5	4	4	4	4	4	3	6	2	5	4	2	3	4	5	5	3	4	4

* - evaluated by author, results of evaluation were ranged by 12-points scale, where 12 points mean highest intensity of inter-cities relationships, 1 point means lowest intensity of inter-cities relationships

Table 3. Ranking of cities – most important economy partners, 2012*

№	City	Ranking of cities – important economy partners				
		5	4	3	2	1
1	Bangkok	Singapore	Hong-Kong	Paris	New-York	London
2	Barcelona	Frankfurt	Madrid	Paris	New-York	London
3	Berlin	Toronto	Tokyo	Paris	New-York	London
4	Buenos-Aires	Hong-Kong	Paris	Tokyo	New-York	London
5	Hong-Kong	Paris	Singapore	Tokyo	London	New-York
6	Jakarta	Tokyo	Sydney	Paris	New-York	London
7	Johannesburg	Hong-Kong	Singapore	Tokyo	New-York	London
8	Kuala - Lumpur	Tokyo	Sydney	Hong-Kong	New-York	London
9	London	Los-Angeles	Tokyo	Hong-Kong	Paris	New-York
10	Los-Angeles	Paris	Tokyo	Hong-Kong	London	New-York
11	Madrid	Milan	Tokyo	Paris	New-York	London
12	Manila	Singapore	Shanghai	Sydney	New-York	London
13	Melbourne	Hong-Kong	Paris	Sydney	New-York	London
14	Mexico	Hong-Kong	Madrid	Tokyo	New-York	London
15	Milan	Singapore	Paris	Tokyo	New-York	London
16	Moscow	Tokyo	Hong-Kong	Paris	New-York	London
17	New-York	Los-Angeles	Paris	Tokyo	Hong-Kong	London
18	Osaka	Toronto	Paris	Tokyo	New-York	London
19	Paris	Singapore	Hong-Kong	Tokyo	New-York	London
20	Beijing	Sydney	Hong-Kong	Paris	New-York	London
21	Rome	Frankfurt	Tokyo	Paris	New-York	London
22	San - Paulu	Madrid	Paris	Tokyo	New-York	London
23	Santiago	Madrid	Paris	Tokyo	New-York	London
24	Seoul	Hong-Kong	Paris	Sydney	New-York	London
25	Sydney	Paris	Singapore	Hong-Kong	London	New-York
26	Singapore	Tokyo	Paris	Hong-Kong	New-York	London
27	Istanbul	Singapore	Hong-Kong	Paris	New-York	London
28	Stockholm	Milan	Toronto	Paris	New-York	London
29	Tokyo	Singapore	Paris	Hong-Kong	London	New-York
30	Toronto	Sydney	Singapore	Paris	New-York	London
31	Frankfurt	Hong-Kong	Tokyo	Paris	New-York	London
32	Chicago	Hong-Kong	Paris	Tokyo	London	New-York
33	Shanghai	Paris	Sydney	Hong-Kong	New-York	London

* - made by author. Only 5 cities – the most important economic partners were identified and ranged

It is obvious that in most cases the most important economic partners of all analyzed cities are London, New-York, Hong-Kong [12], Tokyo, Paris (it has to be noted that Zurich and Geneva was not considered in this study) and Singapore. Due to maintaining own intensive connections with capitals of Latin America we can see in this Global Ranking Madrid, and also Toronto, Sydney, Shanghai, Frankfurt that have a growing economic impact in different regions.

It can be concluded that cities playing less significant role in the global economy in general, however, have more diversified foreign economic relations, maintaining relationships with major urban economies of the world at approximately similar level of intensity.

While cities with a real global impact such as Hong-Kong, Paris, London, Tokyo, Singapore, New-York are increasingly specialized in internal (within a group) relationships.

On the one hand, this trend is logical in context of growing influence of global cities - they are currently forming a framework of the world economy. On the other hand, a desire to limit and to fix the list of global economic centers (to prevent a formation of new centers of global economic impact) also demonstrates.

This phenomenon, called glocalization, is a concentration of international economic interactions within the countries - economic leaders is well studied now [13]; its economic causes and patterns are identified. Our study confirms that a similar trend is relevant for the global cities.

Table 4. Rank of cities with most diversified international relations, 2012*

№	City	№	City	№	City
1	Osaka	12	Seoul	23	Milan
2	Berlin	13	San - Paulu	24	Mexico
3	Rome	14	Jakarta	25	Moscow
4	Stockholm	15	Sydney	26	Frankfurt
5	Barcelona	16	Buenos-Aires	27	Los-Angeles
6	Istanbul	17	Santiago	28	Singapore
7	Shanghai	18	Beijing	29	New-York
8	Melbourne	19	Chicago	30	Tokyo
9	Johannesburg	20	Toronto	31	London
10	Kuala - Lumpur	21	Madrid	32	Paris
11	Manila	22	Bangkok	33	Hong-Kong

* - made by author

On the one hand, glocalization of the cities shows that access to highly integrated transnational movement of capital and finished goods and services is considerably limited.

Table 5. Ranking of the cities depending on their integration in International economic relationships, 2012*

№	City	Index	№	City	Index	№	City	Index
1	London	1500	12	LA	1031	23	Manila	848
2	New-York	1468	13	Mexico	1009	24	Beijing	843
3	Paris	1261	14	Santiago	978	25	Johannesburg	802
4	Hong-Kong	1236	15	Bangkok	941	26	Barcelona	797
5	Tokyo	1231	16	Moscow	927	27	K - Lumpur	797
6	Singapore	1192	17	Jakarta	920	28	Stockholm	725
7	Sydney	1151	18	Buenos-Aires	904	29	Istanbul	723
8	Frankfurt	1118	19	Seoul	886	30	Shanghai	679
9	Milan	1111	20	Chicago	877	31	Rome	646
10	Madrid	1093	21	Melbourne	869	32	Berlin	511
11	Toronto	1071	22	San - Paulu	850	33	Osaka	467

* - Made by author, Indexes of intensity of inter-city relationships were used. 35 world-largest urban economies were considered. As a maximum London index was considered (1500)

“Entry barriers” that “new cities” have to overcome in their way on the global level become higher and higher every year. And the initiators of this growth are the globalized urban economies not interested in losing their capacity to determine the world economy trends.

4. HIERARCHY OF GLOBAL CITIES: MODERN STRUCTURE AND POTENTIAL TO TRANSFORM

Based on results of the study (formation of global cities’ network) and conclusions about world hierarchy of the cities, we can imagine a network of cities that are currently concentrating most of the world production and distribution (Fig. 3).

As follows from Fig. 3, global cities (New-York, Hong-Kong-Tokyo, and London-Paris) are more closing on the interactions with each other (arrows 1, 2, 3) and provide a global range of movement of productive factors (including innovations and information, labor and capital).

These are three historic centers of world capitalism that economic role is currently prevailing and dominating in the world economy.

Five global cities using considered instruments of entry barriers control and regulation obviously will retain their dominant position in the world economy in conditions of continuation the current trends and patterns of international economic integration.

In our view, changes within a circle of global players are possible only in paired centers (Hong-Kong - Tokyo, Paris-London), where one city will displace another.

In Europe, London will remain its leadership due to the role of British capital in global economic progress (London already overtook Paris by numerous indicators such as economic and social development, integration into the global economic space).

Actually, Paris’ leadership in Europe is not based on its global economic role, but rather, on the opposition of continental to British economic policy [14]. Existing differences in the trajectories of UK and France development (even both countries are members of the European Union) required a continental European counterweight for London. Frankfurt or Milan could not be these counterweights; primarily due to their small size (they are essentially smaller than London by population and economic power). Paris, as an oldest and third (after Moscow and London) populated capital of Europe, is a recognized world cultural and economic center and is much better suited for the role of continental European trends’ consolidator.

Currently, there are two possible scenarios for the European Union, and both of them show a decreasing of Paris’ economic role and its movement out of the global cities’ range.

The first scenario is a final integration of the European Union, full adoption of the European Constitution, formulation of pan-European public authorities and so on. In this case, a need of counterbalance with London will disappear and politic and economic role of Brussels will significantly increase.

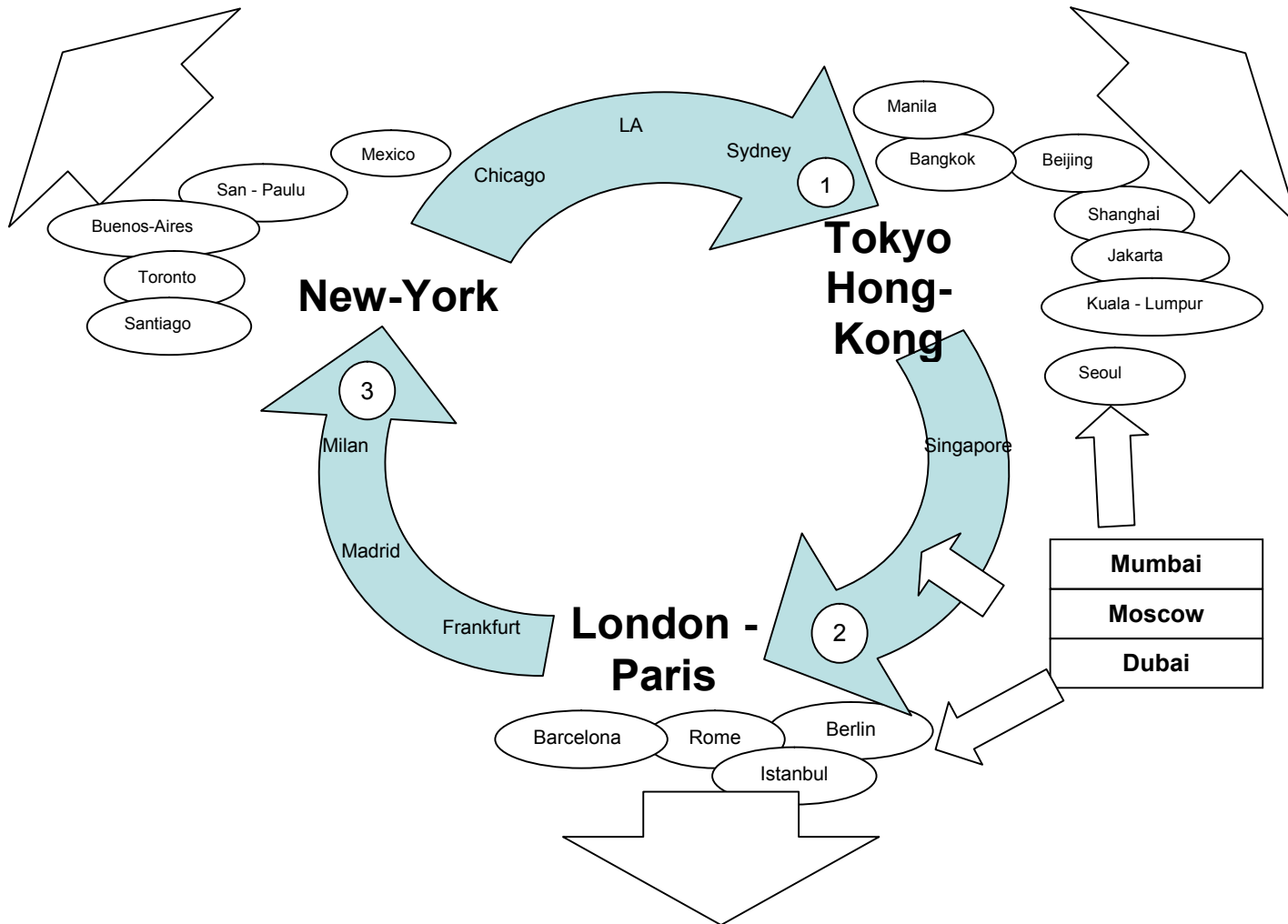


Fig. 3. Global cities' net (made by author)

The second scenario is preservation and escalating of problems of European integration. In this case Paris (that is less related with a global economy) will lose its economic impact due to the increasing of economic role of largest cities in disintegrating Europe (such as Madrid, Milan, and Frankfurt).

In Asia, the situation will also change. In our opinion, the only one Asian city will remain a global leadership. This city is Hong-Kong, now actively ousting the former global leader from Asia - Tokyo.

Hong-Kong is a unique project of global city that maintains a maximum integration into the world economy and has a strong support from the Chinese mainland, largest and dynamic economy in the world.

Hong-Kong is an independent player of the world economy that has all attributes of global economic entity (national financial and monetary system, political sovereignty).

As a city-state, deprived of rural population and any problems related with economic integration, Hong-Kong can maximal orient own economies to the global world, to build a global power [12].

Tokyo, being a capital of large Asian country, cannot develop, fully focusing on the global economy, especially in relevant structural problems of Japanese economy.

City's wheels from the national economic system, intensification of urban globality, can undermine an economic security of the city, because in the globalized world city has to interact with cities of equal economic power or even with countries whose political and economic weight may be substantially greater.

From this perspective, Hong-Kong has enormous competitive advantage. Hong-Kong can be maximum focused on the world economy, can conduct an active global economic activity and form an infrastructure of global finance and management. At the same time, in case of global or regional crises, Hong-Kong can always be supported by powerful Chinese economy (since 1997 Hong-Kong is an autonomous Chinese territory). For example, in 1998 Chinese government implemented complex financial investments "saved" Hong-Kong in the midst of the Asian crisis.

Tokyo or Singapore has not abilities to conduct really global economic activity and at the same time to be in zone of responsibility of the world's largest economic system.

Megacities of mainland China (Beijing, Shanghai, Guangzhou), are much more (than Hong-Kong) dependent on China economic system, political decisions of Chinese government. Moreover, they are much smaller (than Hong-Kong) global players and not be able to fully accumulate the benefits of a global city in the near future. Hong-Kong for China also retains an importance as an economic project (PRC even keeps Hong-Kong dollar and Hong-Kong right to conduct independent foreign trade activities), that will save a partner interactions between Hong-Kong and cities in mainland China.

In addition to global cities, in Fig. 3, we also can see two other types of cities. The first type is the cities of global orbit that provide a transfer of political and economic impact of the global centers, are also highly integrated into the world economy; however, they are not capable to have a significant effect on it.

In the language of management, these cities belong to middle level and transfer trends, initiated by the global cities to the level of national economies. These cities are regional leaders with high impact on its regional economic development.

Geographical location of the global cities provides uninterrupted operation of channels for transfer of information and production factors required for functioning of the world productive and distributive system.

Finally, the third type of cities is the "cities - gates", that provide connections of national economies to the cities of global orbit. These cities are deprived of world economy impact and keep intensive relationships with economy of the country and conditions of its functioning. Moreover, only national economy, its dynamics and indicators of development are the key reasons of cities presence in the list of global "gates".

If country loses its attractiveness for the world economy, an economic importance of "city-gate" rapidly shrinks. For example, in the early twentieth century, Rangoon (Yangon) was a major "gateway" of Southeast Asia. Nowadays, in a situation of acute political conflict and permanent economic crisis in the Union of Myanmar Yangon has no any value as a global city. Histories of most "European" city of Asia - Saigon (Ho Chi Minh), largest city in the Middle East - Baghdad, and economic capital of South Africa – Johannesburg are largely similar.

According to Fig. 3 there is only one global city in the second part of the global orbit - Asia-Europe - Singapore. From our point of view, taking into account a geographical specific of localization of the largest cities in South Asia, the Middle East and Russia, this chain of global urban orbit will be under high competition for leadership between three cities whose place in the global urban network is not defined now. These cities are Mumbai, India, Dubai and the Russian capital (less likely).

Mumbai is now a stronghold of economic development of the second populated country in the world, largest and dynamic economic system of the planet. India is interested in the presence of own cities within the orbit of global economic power (along with Singapore or Frankfurt).

Mumbai already plays a role of "gate" in the Indian economy, as has a potential to transit on a higher level in the global urban hierarchy.

This potential is defined by growing financial, cultural and innovative abilities of this city, by the presence of headquarters of 5 world - largest TNCs in Mumbai, city' popularity for international exhibitions, rapidly modernizing business, transport and social infrastructure.

If India has not other cities competing for the leadership with Mumbai (such as Delhi, Kolkata or Chennai), it already would be regarded as a real player of global orbit. In the same existing conditions, Mumbai needs a qualitative improvement of living conditions of local people, enhancing of international relations (not only in Asia), building of effective institutions of global finance, transformation to not only world cultural (for example, due to success of Bollywood) but innovative and technological centre.

Mumbai authorities understand this and already implement a program of urban development that called by journalists "To overtake Shanghai in 2020!" [15].

Experience of Dubai is largely unique (as Hong-Kong). In fact, this city is not now even a "gate" due to relatively low economic importance of the United Arab Emirates economic system.

This country has excellent living conditions for local residents. But their quantity (about 1 million) does not allow considering Emirates as a promising market. There is no large-scale industry and any potential for growth in the nearest future. Meanwhile, the city's authorities past 25 years have implemented an unprecedented program of artificial (not based on economic realities) transition of Dubai to the rank of global cities.

To do this municipal authorities have set up super modern logistics, transport, services (including banking, international finance institutions, insurance, trade and tourism) infrastructure.

Since 2005, the city of Dubai has implemented large-scale programs to attract highly qualified specialists in every field of science, research and development (projects of Internet City, Education Village, Health City, and Silicon Oasis). Dubai now is a world recognized center of tourism, conventions and business trips. Before 2008 Dubai was the world leader in sales of real estate to foreign owners (due to odious development projects) [8]. Projects of Dubai-land, Festival City, and Movie-land promise to make a world center of entertainment and cinema in Dubai.

Thus, Dubai has an infrastructure of the global city, but its real economic impact is insufficient for the city's transition to the top of global cities pyramid. In order to overcome this limiting fact, in terms of lack of time to develop own production and distribution networks, Dubai businesses are actively investing every attractive projects, regardless of geography and economic spheres - from retailers of South Africa to London Stock Exchange.

Together with all success of these operations, in the economic sense Dubai has significantly less global impact than metropolises of China, Europe or India. However, taking in account ambitions of the city leadership, fact that Dubai is rapidly recovering from the financial crisis in 2008, and already claimed plans to diversify foreign investments in the country and to attract foreign TNCs (by creating the most favorable business conditions), as well as urban strategy of innovative modernization (that should turn Dubai into a city of high technology and cultural capital of the world in 2030), the opportunities of this Arab city to enter into a global urban orbit are very real.

The third competitor for entrance into the global urban orbit (in the chain Asia-Europe) is Moscow. However, a presence of Moscow in list of possible candidates is just based on the Russian capital's geographical location and historical role as a center of state between Europe and Asia, and not on the real economic strength of the city.

Certainly Moscow is one of the most famous cities in the world, has an authority and power to impact (also due to the Soviet legacy) [16]. But the modern Moscow's economy role in the global network is a "city - gate" to the Russia economy, way to Russian resources.

And even this function Moscow doesn't make well (Moscow's position in a global cities' rank is lower than position of Jakarta or Buenos - Aires). Moscow has best Russia' infrastructure to develop international contacts (transport, communications, exhibition activities, financial institutions, huge consumer market). Moreover Moscow is a federal capital and this is an extremely important competitive advantage within the current structure of Russian economy.

No-one Russia city has same advantage, although some of them have a more favorable geo-economic position (for example, the city of Surgut where world - largest MNC [17] based, or Vladivostok, Kaliningrad and St. Petersburg).

As can be seen from this study, Moscow has no any socio-economic indicator comparable with similar indexes of the global cities. Moreover, an increasing of concentration of Russia international economic initiatives in Moscow, year by year reduces an efficiency of Moscow's business functions – due to rising of living cost, price of real estate, indicators of city's corruption, deteriorating of business conditions, increasing of urban transport problems, crime and so on.

This negatively affects investment attractiveness of the city, and desire of transnational business to include Moscow in the list of prior and favorable locations; reduces financial performance of domestic corporations based in the city. Moscow's functions as a "gateway" to Russia national economy in such conditions is transformed into the "parasite" role of "evil customs" and dramatically reduces an efficiency of Russia economical development.

Of course, Moscow already has some attributes of global economic center. The city is actively trying to improve an own image, to attract tourists and businessmen, to implement pretentious infrastructural projects. But speed and cost of this upgrade can't be compared with growing of mega-cities of the South and East. In such a difficult situation, the development of Moscow is seen simultaneously in two directions:

- Improving of efficiency of the Russian capital as a portal to connect national economy with global flows of goods/services and productive factors. It will help to overcome problems of regional differentiation (at least in the European part of Russia), will provide opportunities for increasing of global competencies of Moscow;
- Inclusion of Moscow in global cities orbit (in the chain Asia – Europe), turning Moscow in a world-class financial center, performs the broadcasting role between Hong- Kong and London in the long term. This will require a number of infrastructure and institutional measures to level a substantial loss of Moscow to its closest competitors - Dubai and Mumbai.

The study of modern global cities network, based on the definition of inter-cities contacts, of their integration in transnational production and distribution, led to the following conclusions.

As global cities determining the world economic progress we can consider New-York, a European couple - London / Paris and Asian couple Hong-Kong/Tokyo. In the dynamics of the current conditions of world economy Paris and Tokyo, according to our findings, will leave the circle of global cities.

Global cities, having abilities to impact on the functioning of transnational entrepreneurship, international flows of productive factors, support a preservation of existing global cities hierarchy, create the entry barriers of global level of urban economies (for example, innovative potential of the cities, their financial resources, political influence, investment attractiveness, domestic consumption and so on).

Global economic axis which hubs are New-York-London-Hong-Kong, assumes so-called cities - compilers that are integrated into the world economy, and are relatively weakly dependent on the functioning of economic systems of their countries. These cities broadcast

the trends initiated by global centers to regional markets; provide their connectivity to the global axis of "cities - gates".

Finally, the third level of the global cities hierarchy is presented by so-called "cities-gates" that provide connections of national economies to the transnational production and distribution system.

This hierarchy is almost completely framed; significant transformations of its framework in the short term with maintaining of current trends of the world economy are not expected.

Modernization of the global axis Hong-Kong-London due to the additional inclusion of Mumbai, Dubai or Moscow is possible. It allows us to consider these cities as competitors at the present stage; and the prospect of entering in this global axis is a leitmotif of realizing policy for their local development.

5. CONCLUSION

Existing methods of determining the patterns of global cities' network functioning based on a comparison of urban development indicators [18,19,20,21] without taking into account regional features of the cities and relations with own countries. Thus, based on proposed classification, global cities hierarchy and on the evaluation of 15 criteria (number of head offices / branches of national MNC, value of inter-cities export-import operations; inter-cities investment flows, passenger traffic, Internet traffic, number of tourist exchanges, state of information environment development and so on) paper analyzes an intensity of economic interactions between cities, determines their potential impact on the global economic progress, value of their integration into the global network.

Maximum intensity of economic relationships was observed between pairs of cities - London-New-York, Hong-Kong-New-York, Hong-Kong-London, and New-York-Los-Angeles. Less intensive relationships are built between geographically dispersed regional centers, for example, Berlin-Shanghai or Osaka-Barcelona.

Cities with less significant role in the global economy, however, have more diversified foreign economic relations; maintain connections with major urban economies in the world at approximately the same level of intensity. While cities with a global impact (Hong-Kong, Paris, London, Tokyo, Singapore, New-York) are specializing in internal links (within a group). This trend (glocalization) is legitimate in a growing global influence of these cities; they form the framework of current world economy.

Assessment of municipal infrastructure allows selecting tools of conservation a global leadership of few cities associated with the functioning of global finance institutions, transnational movement of highly skilled labor force, innovative development and inner (urban) consumption.

High capitalization of stock exchanges of the global cities, provided mostly by foreign capital, demonstrates their ability to concentrate within its own network of global financial flows. Global cities also act as leaders in the field of innovations, creating a necessary infrastructure for new knowledge generation, opportunities to commercialize innovations by expense of venture investment programs and public funding.

Global cities that have a maximum variety of economic, social, cultural, recreational, service infrastructure, headed the ratings of most attractive places to live, ensure a constant supply of highly qualified labor from around the world. The major advantage of a global city also is capacious and diversified consumer market that develops through growth of urban population income. Quantity and quality of consumer demand is also a condition for financial, innovative and political progress of the urban economy.

3. Global cities (New-York, Hong-Kong-Tokyo, and London-Paris) are closing more on interaction with each other, providing a range of major global movement of factors of production, including innovation and information, labor and capital. These five global cities representing three world centers of capital will retain their dominant position in the global economy while modern trends of international economic integration continue.

Changes in circle of the global players are only possible in the pair centers (Hong-Kong - Tokyo, Paris-London), where one city will displace other.

In Europe where the position of Paris is not based on its global economic role, but rather, on the opposition to the British continental economic policy both by optimistic and pessimistic scenarios for European integration development, London will be only one global leader.

Hong-Kong will be the only global city in the Asia-Pacific region. Now Hong-Kong is slightly inferior to the Japanese capital in its socio-economic development and economic role, however, Hong-Kong is a unique project of global city that, maintaining a maximum integration into the world economy, has a strong support from the Chinese mainland. In addition to the global cities in proposed version of world urban network we identified cities of global orbit and "cities-gates". Cities of global orbit provide a transfer of political and economic influence from global centers and are highly integrated into the world economy.

Their geographical location ensures a smooth functioning of communication channels and transfer of productive factors required for global production and distribution system.

"Cities – gates" allow connection of national economies to the cities of global orbit. They are deprived of impact on the global economy and keep relationships with economy of the country and conditions of its functioning.

4. Currently there is only one city in the second part of the global orbit - Asia-Europe - Singapore. Taking in account geographical specific of localization of the largest cities in South Asia, the Middle East and Russia we can suggest that this place in the global orbit will be a place of strong competition between three cities, whose place in urban global network at the present time is not defined - Mumbai, Dubai and Moscow.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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