

***The impact of WTO deregulation and liberalization on hubs***

***- Some hypotheses -***

***to be presented at the workshop “WTO and World Trade, II”***

***in Seattle, April 28-29, 2001***

***organized by the Research Center for International Economics  
City University of Hong Kong and University of Washington***

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1. The phenomenon of **hubs** is invariably linked to the very illustrative picture of “hubs and spokes”. From an economic geography point of view hubs are to be understood as locations that have the function of providing linkages of different kinds to the surrounding region and to the world economy, while at the same time being concentrations of agents, institutions and expertise. The phenomenon of hubs is at first hand not determined as regards the activities pursued there and their specialization patterns evolve with changes in the technological and global economic environment. A very good example of hubs are trade and logistics centers like Singapore. Because of the importance of physical distance for the transportation of goods, such locations mostly perform regional functions. They provide an adequate infrastructure and act as “market-makers”. Another example of hubs are financial centers. With the increasing mobility of capital a number of authors have noted the development of a hierarchy of global, regional and national financial centers. The potentials that have been created by the development of new information and communication technologies (ICT) have led to a process of restructuring of corporate spatial organizational patterns. They have offered new opportunities for the decentralization of some activities. At the same time the importance of proximity and access for decision-making processes as well as innovative activities have persisted. Proponents of the “world city hypothesis” have among others analyzed the spatial constellation resulting from this and other developments: Some locations in the world economy have a global role as centers of decision-making, financial centers etc. As regards the hub characteristics of such locations, the new patterns also lead to a hub and spoke structure in the field of creation, collection and distribution of information. Examples for relevant locations are manifold and not restricted to the level of world cities.
2. The linkage functions of hubs are determined by technological possibilities as well as the degree of openness of the world economy and hub locations themselves. Moreover, the competitiveness of hubs is decided by the “value-added” they can offer. This value added is strongly related to the availability, quality and price of a wide range of services. This is why the resulting spatial economic constellation is not only a matter of opening borders for trade of goods and services, but also of deregulating key sectors of the economy, whose interplay determines the competitiveness of hub locations. Deregulation and liberalization improve the possibilities for foreign firms in the telecommunications sector to be active in hub locations. Moreover, global telecommunications deregulation might enhance the linkages of hub locations to other centers, the region and the world, although the realization of this aim is also vitally related to the creation of a system of good governance as regards the access to established networks and the creation of new ones. Both – liberalization and deregulation of the service sector – are topics that have in the last decade been covered by WTO negotiations.
3. One of the most pervasive debates is nowadays centered on the importance of the telecommunications sector for competitiveness. This is due to the revolution information technology seems to have brought into our lives. The field of telecommunication has been covered by the WTO Basic Telecom Accord of 1997 as part of the GATS (and the Ministerial Declaration on Trade in Information Technology Products). In this agreement 69 WTO members concluded to create a framework for liberalizing their telecom markets by providing competitive safeguards, by trying to guarantee interconnection under non-discriminatory terms, by creating transparency in licensing processes and by guaranteeing the independence of regulators. The agreement does provide a framework of principles, but still allows diversity of development paths.

4. In earlier papers (see attached list), we have dealt with the fact that the global or regional importance of hubs is not necessarily a matter of their size. More important seems to be their openness to economic activities by foreigners and their capability to adapt to changes or even to lead them. Moreover, we have tried to approach the question of the decision-making process in which firms choose to locate some of their operations in hub locations. The ease of transaction and interaction as well as the informational environment can be supposed to be important determinants for this. We are convinced that both of these interdependent aspects – the global or regional reach as well as the attraction of hubs for multinational firms - will be strongly influenced by the changes in the field of telecommunications. The effective provision of ICT might offer hubs new opportunities to extend their operations on a global scale, as it becomes easier to communicate information to the outside world and to access global information (within the network of multinational firms or outside). General processes of deregulation in the telecommunications sector that concern a number of countries, can be expected to improve the global flow of information depending on the infrastructures available at different locations. Moreover, the telecommunications industry is a major industry, so that deregulation might also imply huge potentials for investment. However, deregulation not only provides incentives for foreign firms to enter the market, it also improves the locational conditions for firms from a bunch of other industries that rely on telecommunications. Much of the debate on deregulation in the telecommunications sector seems to be centered on market access for foreign internet service providers. Nonetheless, we should keep in mind that the special importance deregulation has for hub locations is due to its effects on the interchange of flows with the rest of the world by a number of different agents and industries and to the improvements of accessibility that are created.

5. Without doubt the telecom sector is of major importance for the competitiveness of hubs. It improves the coordinative functions between headquarters and subsidiaries and creates accessibility in general. The possibilities of global operations have changed the boundaries of the influence of hub locations. Moreover, ICT change the way transactions are done by creating opportunities for e-commerce and shifting financial transactions on electronic platforms. They support the physical movement of goods and can make it more efficient and they create new markets for internet services, information technology products etc. Thus, ICT influence traditional key sectors of hubs. In many senses ICT are general-purpose technologies that serve as a platform to improve the performance of other sectors, e.g. by lowering transaction costs. Moreover, their impact on a broad range of sectors is not restricted to pure cost aspects. As they help to open up markets, they also change the competitive environment of these markets.

A number of people have wondered whether the "telegeography" of tomorrow will be different from the economic geography of the past. In the following paragraphs we will have a look at the impact of WTO deregulation in the telecommunications sector on three Asian hub locations (Singapore, Hong Kong and Tokyo). Some of these effects are those effects which we would expect from processes of deregulation, some have evolved unexpectedly and are related to the specific characteristics of the telecommunications sector (the long dominance by national monopolies often owned by the state, entry barriers because of network effects etc.).

6. The impact of the deregulation of the telecommunications sector on Asian hubs (Singapore, Hong Kong and Tokyo):

Like other services sectors the telecommunications sector<sup>1</sup> has long been a state monopoly in Asian countries. During the last two decades the importance of this sector as well as international agreements like the WTO accord have induced many countries to deregulate (privatize, lift restrictions on foreign capital, license new competitors, establish independent regulatory authorities). The following developments have been observable:

- opening up the market to foreigners: Deregulation also means to open the telecom market for foreign providers. Thus, the former incumbents (NTT, SingTel and HKT) are by now threatened by foreign competition. Hong Kong has often been considered as a pioneer in deregulating its markets. Also in Japan deregulation already started in the 80s. However, NTT has been holding a dominant market share for a very long time. This has partly been due to the problem of guaranteeing non-discriminatory interconnection rates to new competitors. NTT's persisting power has resulted in discussions about breaking it up, which happened in 1999 when NTT was separated into three different entities under one holding. Still this does not seem to have solved the problem, and the political willingness to take new measures seems to be weak in Japan by now.

Because of the rapid deregulation process in Hong Kong, Singapore authorities have decided to speed up the deregulation of their own market. This is why a competitive market has been created in 2000 (2002 was intended before). SingTel now faces competition by StarHub, a consortium of NTT, British Telecom, Singapore Power and Singapore Technologies. Singapore's deregulation process was faster than expected. Also, SingTel realized price cuts and service improvements even before the liberalization. This speeding up of the process was induced by the fear that Hong Kong would override Singapore, so that kind of a domino effect in liberalization was created. Governments have undertaken studies to assess the benefits of early deregulation. There were expectations that the growth potentials would be huge and that large amounts of investment from the information and communication sector would be lured into economies. The Singapore government paid a high sum to SingTel to "reward" it for the quick deregulation.

What we observe is a change away from the view that telecom is a public service and an infrastructure owned by the state. To a big extent the speed of deregulation in the telecommunications sector as well as the problems countries may run into, if they do not keep pace are due to the fast changes in this sector. A very good example for this is the fact that the debate about interconnection rates between the US/ Europe and Japan can be expected to be only the beginning of more discussions. Analysts have predicted that the volume of cellular phone calls in Japan will surpass that of fixed-line calls in 2004, which would make more negotiations with NTT DoCoMo, Japan's mobile telephone carrier, necessary. Only recently NTT DoCoMo has announced that it would open its network to other carriers in 2003. ICT are an example for a technology that has changed life and business so much that new rules have to be created that have to be adapted to a permanently changing environment.

- internationalization of formerly national companies: Increasing competition in domestic markets leads to a loss of market shares and traditional cash cows for domestic incumbents. To be competitive on a global scale, these have internationalize their activities and to reach a critical mass. Both, SingTel and HKT have operations in a variety of other Asian countries. Moreover, deregulation has induced a wave of international mergers & acquisitions. Most famous is probably SingTel's effort to get

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<sup>1</sup> The pace of deregulation in the telecommunications sector and the difficulties in establishing a good system of governance in this sector are without doubt related to the fact that telecommunications comprise a wide range of technologies. This creates complexity from a static point of view, but moreover the telecom sector is probably one of the fastest evolving sectors.

stakes in HKT. This was not successful, partly because of the high government influence in SingTel (79 %). Hong Kong was reluctant to let a foreign government gain influence in a critical sector. Finally, Pacific CyberWorks, a Hong Kong based firm, took over HKT (with a relatively small remaining stake of C & W). Other failures in SingTel's internationalization process were reported, which shows that internationalization in formerly strongly deregulated sectors is not a frictionless process especially for government-linked firms. These problems have made the Singaporean government decide that it would reduce its stake in SingTel to 68 % in order to give it a possibility to become a pan-Asian company. Altogether a number of people fear that the deregulation of the telecom sector leads to a concentration in the market for international bandwidth in the hands of few firms. In some cases internationalization of domestic firms seemed to precede the process of opening up domestic markets: Even though NTT had already become a major player in European, Asian and US markets, Japan's domestic competitive environment has long been criticized.

Both aspects, the opening up of domestic markets as well as the internationalization of domestic firms without doubt shape the increasingly multinational character of hub locations. They are related to the task of unbundling the roles of policy-makers, regulatory authorities and the management of telecommunication providers.

- increase market size: Increased competition in the telecommunication sector can be expected to lead to lower rates, better service and more innovation. This may also stimulate demand by firms as well as private internet users. The Asia-Pacific region has been expected to comprise some of the strongest growing markets for international bandwidth (although estimates about current and future market sizes vary).
- (micro-economic profits, the global infrastructural environment and a new system of international governance: There have been ambitions by a number of players to get their share in the process of building up internet network infrastructure in the Asia-Pacific region. One of the major problems has long been the dominance of the US and the unequal burdens of interconnection fees. Asian governments and firms complained that they carry a high cost burden for access to the American network. There has even been an Asian consortium planning to establish a router in Palo Alto, California to decrease costs of access. The network externalities of ICT may lead to new forms of co-operation. There has also been a strong engagement by American firms to draw profits from this gap between demand and supply. The high importance of the telecom sector for growth and the increasing dominance of some MNCs create new political-economic interdependences that cannot be dealt with by traditional (national) regulatory concepts.
- We may suspect that the deregulation process makes important differences in the policy approaches and economic systems of countries visible. E. g. the high government involvement in Singapore is more and more considered a problem. Government-linked firms are supposed to be overcautious and complacent. Moreover, government links may inhibit international acquisitions. The proportion of state-controlled firms is higher in Singapore than elsewhere. In the past this has been said to have crowded out local private enterprises and prevented the development of a dynamic local network of operations. In some sectors, local firms have been found less efficient than foreign controlled firms.

Moreover, the different policy approaches of the countries become very visible and their competitiveness may also be at risk, if they want to keep their traditional policy approaches. E. g. Singapore has been known for its strategy of gradually lifting restrictions to minimize systemic risks. It has in the past been known as very responsive to the need of its multinational companies. This is opposed to the often-

- cited laissez-faire strategy of Hong Kong. The slump in Japan shows that a catch-up policy approach that has long been applied in Japan may also lead to a lagging behind in competitiveness. The process of deregulation has in Japan very much been centered on intensive discussions about the topic of interconnection fees (regional and local). The very high rates charged by NTT were blamed for a lack of competition in the Japanese market. This went so far that the US announced that it would bring this topic on the agenda of WTO. Many of the difficulties were centered on the very different regulatory frameworks in the US as well as most other countries and Japan. While Japan focuses on the fact whether carriers own or lease lines, the US framework is centered on the dominance of carriers in the market. Meanwhile, there has been a US-Japan agreement that has however led NTT to announce that it would cut jobs. It seems as if the rapid evolution of the Internet is apt to highlight political shortcomings very quickly. The rapid development of ICT shows that the pace of political reform has to be guided by the pace of changes in the technological environment. The ability to adapt to new technological frontiers might be an important criterion to distinguish leaders and laggards in the political-economic sphere. The traditional development pattern of the flying geese may no longer apply to Asia's information society.
- Even if important sectors have nowadays been opened up, restrictions in a number of service sectors remain. E. g. Singapore still has a closed media sector. There are still some restrictions in the field of transport and legal services that are not part of its WTO commitment. The liberalization of these sectors will be vital for Singapore's aim to become a knowledge hub.
7. Some concluding remarks: Altogether it becomes obvious that deregulation in this quickly evolving sector is not only a technical matter, but requires a whole change in mentality. Governments in Asian economies have (started) to realize that huge growth potentials go along with a loss of control, and firms have to stop relying on monopoly rents. Deregulation of the telecom sector means allowing foreign influence in a sector that is nowadays considered of major importance for growth. The deregulatory process in this sector is only one example for the increasing "multinationalization" of Asian hub locations. It changes the rules of competition as well as the requirements and regulatory potentials for the political sector.

However, evaluating of the effects of telecommunications deregulation with the government programs of locations like Singapore and Hong Kong at hand, we realize that the idea of a (telecommunications) hub has also become a politically exploited slogan. This may imply the danger that governments no longer take into account the specific strengths and weaknesses as well as the potential complementarities between locations. Primacy based on telecommunications infrastructure has become a widely pursued goal whose dominance is rarely doubted.

Moreover, it might be considered problematic to assemble Singapore and Hong Kong in a group with Tokyo. This is not necessarily due to their size and global or regional importance, but rather to the very different development dynamics of these locations. Both, Singapore and Hong Kong have taken a proactive role in attracting foreign capital and opening up their economies. The hub idea takes a very important position in their development dynamics. Meanwhile, Tokyo's regional role does not seem to be decisive. Its importance rather seems to be derived from its role as the national center of a triad economy. Japanese politics have not particularly aimed at attracting foreign firms. Their interest is mostly derived from the attractiveness of the huge and for a long time prospering Japanese market and not from the beneficial regulatory and

business environment. Today Japanese reforms seem to a huge part be due to outside pressure. Some people have even judged that the character of Japan's deregulation has augmented the power of its regulatory authorities. The telecommunications sector has been a focus of European and US firms and bilateral as well as multilateral political bargaining. Thus, the dynamics are of course much different for Japan than they are for small locations like Singapore and Hong Kong that rely on their role in the regional (and global) economy.

#### 7. Questions to be discussed:

- GEOGRAPHY: What remains of the notion of the hub in the cyber-age? A number of people have doubted whether hubs can still be located geographically in the cyber-age. Nonetheless, internet, telecom, knowledge and a number of other kinds of hubs have become frequently used slogans by political decision-makers. It seems as if the characterization as a hub has implications for the regional and global importance of locations. Some people have criticized that the major part of the projects realized are "feudal notions of real estate" (Westland 2000).
- LONG-TERM EVOLUTION: Even if countries are nowadays in different regulatory and developmental states that are also reflected in their telecommunications infrastructure, can we expect that these differences will persist? Or are we in a process of long-term convergence at least of a few successful players (possibly more or less guided by a WTO regulatory system)?
- GLOBAL AND REGIONAL LINKAGES: In which way does telecom deregulation affect the global and regional "spokes"? Is the less developed regional environment disconnected from hubs in favor of stronger global linkages between technologically leading locations (discontinuous peripheries around remote cores)? Or do regions and nations benefit from the competitive advantages of hub locations?
- DRIVING-FORCES: In how far is the evolution of hubs as players in the virtual world not only the result of a changing environment, but rather a major force that changes the global and regional flows of goods, capital and information?
- REGULATORY DYNAMICS: Can we discern a patterned interaction of political decision-makers in different locations that shape the deregulatory dynamics (political/ technological leaders and laggards or pioneers and followers)?
- REGULATORY PRESSURE: Are there locations that can resist the deregulatory pressure and how does this influence their competitiveness?
- INTERPLAY OF FIRMS AND GOVERNMENTS: The well being of domestic telcos has long been treated as a national issue. Can we expect that this changes with the increasing internationalization of the former national monopolists? How does the interplay of competitive multinational firms and local/ national policies strengthen the competitiveness of some locations?
- THE ROLE OF WTO: In how far has WTO really been the source of these deregulatory measures? Which other driving forces are decisive? Could we have expected such an outcome without the engagement of WTO? In how far can we expect WTO to speed up further deregulation in the future?

**Previous papers:**

“Asia’s international financial centers in the globalized world economy”, paper presented at the international workshop “International Economics and Asia”, City University of Hong Kong, Hong Kong SAR, July 2000.

“Asian hubs: global or regional players”, paper presented at the 17<sup>th</sup> meeting of the Euro-Asia Management Studies Association, Singapore, Nov. 2000.

“The impact of new information technologies on hubs: policies, competition and evolution”, paper to be presented at the 7<sup>th</sup> International Euro-Asia Research Conference, Oslo, Norway, May 2001.

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