Organisation de Coopération et de Développement Économiques
Organisation for Economic Co-operation and Development

06-Jun-2017

English - Or. English

DIRECTORATE FOR FINANCIAL AND ENTERPRISE AFFAIRS
COMPETITION COMMITTEE

Cancels & replaces the same document of 03 April 2017

Working Party No. 3 on Co-operation and Enforcement

SUMMARY OF DISCUSSION OF THE ROUNDTABLE ON GEOGRAPHIC MARKET DEFINITION ACROSS NATIONAL BORDERS

28 November 2016

This document prepared by the OECD Secretariat is a detailed summary of the discussion held during Item III of the 124th meeting of Working Party No. 3 on 28 November 2016.

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JT03415335

DAF/COMP/WP3/M(2016)2/ANN2/FINAL
Unclassified
English - Or. English

SUMMARY OF DISCUSSION OF THE ROUNDTABLE ON GEOGRAPHIC MARKET DEFINITION ACROSS NATIONAL BORDERS

By the Secretariat

1. The **Chair, Renata Hesse,** opened the roundtable by indicating that the discussion would focus on two issues: 1) approaches to defining geographic markets with a national or broader scope; and 2) challenges and limitations to existing geographic market definition tools. The Chair then turned to the **Secretariat** for an overview of the background paper prepared for the roundtable.

2. The **Secretariat** began by noting that its research suggests that the concept of geographic market definition is similar across jurisdictions, with a limited number of nuances. For instance, the European Commission considers the supply of products or services into markets in which the conditions of competition are sufficiently homogenous, whereas US horizontal merger guidelines mention limits to the ability of customers to seek goods or services beyond a certain geographic area and the ability of suppliers to supply within those areas.

3. Two themes that emerged from the cases reviewed by the Secretariat were the questions of: 1) whether certain pieces of evidence should be considered in the market definition process or the competitive assessment, including whether analysis should be repeated in each stage; and 2) whether geographic market definition is required. With respect to the latter, the Secretariat noted the findings of the 2012 OECD roundtable on market definition, which demonstrated a widespread confidence in the concept and importance of market definition. However, where legislation allows, there are instances in which there would be no competitive concerns under any geographic market definition, allowing authorities to avoid defining a market to prevent any risks from setting unnecessary precedents.

4. Factors considered by competition authorities to delineate geographic markets were summarised by the Secretariat, including pricing, which is commonly used evidence but involves challenges such as data availability and statistical analysis issues, including structural breaks in the data or a common third factor influencing movements in prices that could overstate correlation between prices in two geographic areas. Imports can establish the feasibility of foreign producers competing within a country, but they may not always be helpful in deciding whether to widen the geographic scope, and should be supplemented with analysis on import elasticities, which can reflect responses of imports to competitive conditions in a market, but which rely on past conditions in terms of the policy environment and exchange rates that could differ in the future. Other factors include transport costs, language barriers, manufacturing location, after-sales networks and regulatory or trade barriers. With respect to the latter, the Secretariat observed that significant regulatory differences between countries that can impede the free flow of goods between different markets would militate towards a narrower geographical market definition.

5. The Secretariat closed its presentation by identifying three emerging challenges in the area of geographic market definition: possible variation among authorities in the treatment of potential foreign competition, changes in the nature of markets due to globalisation and technology, and the need for information-sharing among competition authorities.

6. The Chair invited the **European Commission** to discuss the study it commissioned on its geographic market definition decisions in merger control. The Commission noted that the study was in response to questions by stakeholders about whether the Commission defines geographic markets too narrowly, and observed that other competition authorities are likely to have also dealt with similar questions. In times of globalisation, when the single market is becoming deeper and companies operate on a global scale competing with international suppliers, companies tend to see themselves as global. So the Commission asked Professors Amelia Fletcher and Bruce Lyons to review its approach to identifying global markets, including whether supply-side substitution ("SSS") should be considered, and whether wider definitions should be adopted to take account of imports. Professors Fletcher and Lyons' study assessed a sample of cases and issued a report ("Report") concluding that the Commission's practice on market definition is well-evidenced and consistent with its notice on the definition of the relevant market for the purposes of community competition law ("Market Definition Notice"). In addition, the Report recommends that: 1) the Commission clearly define the role of geographic market definition relative to the competitive assessment; 2) the Commission not consider supply side substitution for geographic market definition; 3) capacity shares or swing capacity from rapid entrants outside a candidate market should be considered in calculating market shares; and 4) there should be a greater use of isochrones to define markets rather than relying on national boundaries for geographic definitions.

7. The Commission's analysis, consistent with the Report, found that the Market Definition Notice is currently sufficiently flexible to deal with globalised markets. The Commission does not hesitate to adapt its approach as market realities change, and this flexibility in the Notice also applies to use of methodologies – for instance, in the Ball/Rexam merger, the Commission used isochrones and catchment areas for a cross-border assessment of markets, consistent with the recommendations of the Report.

8. **Professor Bruce Lyons** then provided some additional detail underlying the Report's conclusions. First, he noted that the importance of geographic market definition stems from its role in identifying competitors and calculating market shares. However, given the growing focus on competitive effects, the market definition process should be somewhat narrow relative to the analysis of competitive effects. The European Commission's guidelines note that firms with large market shares are likely to have market power, but Professor Lyons noted that this is not the only factor that matters, and the Report looked at what the right dividing line should be.

9. Reviewing European Jurisprudence in this area, Professor Lyons noted the definition from the Hoffman/LaRoche case, that the geographic market comprises the area in which the undertakings concerned are involved in the supply and demand of products and services in which the conditions of competition are sufficiently homogeneous. He put emphasis on the term "sufficiently homogenous", observing that in modern economies, supply and demand may come from different geographic locations, but this does not automatically mean a wider geographic market. Consider the hypothetical test, which involves determining whether a monopoly in a geographic area would be able to raise prices and increase profits. A price increase would not be profitable if consumers would start buying from a different geographic area (demand-side substitution) or if suppliers from outside the area would begin to supply into the area in question (SSS).

10. Professor Lyons observed a commonly-expressed view that geographic market definition must take into account the fact that the world is going global, with competition coming from all corners of the world, and therefore markets are being defined too narrowly.

11. Professor Lyons explained that the Report methodology involved a detailed examination of 10 "knife-edge" cases that provided a wide range of circumstances, including grocery-related products, technology products and basic industrial goods. He and Professor Fletcher also looked at less controversial markets within each of the selected cases (since they were large, they involved many markets), finding that the controversial examples were relatively unusual, and that there was often consensus among the parties about the geographic market definition. In their assessment of the controversial markets, Professors Fletcher and Lyons considered six broad areas of evidence: geographic pattern of purchases, basic demand characteristics, trade flows, barriers/switching costs, economic evidence and the views of customers and competitors.

12. In terms of specific recommendations, Professor Lyons stated that the Commission could clarify the respective parts of geographic market definition and competitive assessment. A clearer structure in decisions and proceedings could help parties understand what pieces of evidence to present for geographic definition, or competitive assessment. In addition, he argued that SSS should not be considered in geographic market definition when such substitution is likely not instantaneous (e.g. when firms would need new distribution networks, and would have to consider the opportunity costs of diverting capacity to the market in question) – rather, these factors should be considered in the competitive assessment. To illustrate, Professor Lyons used the example of two large European firms and a large Chinese competitor, with all three firms selling into Europe with a third of the market each, and the Chinese firm also selling into China with a different set of competitors. Professor Lyons opined that a European geographic definition would better frame the way competition is affected. However, if the same rivalries were present in both Europe and China, it may be a global market.

13. Additional recommendations of the Report include not automatically associating a high import share with a wider market, since the share of imports is less relevant than how imports would respond to a price increase in the market (the import elasticity), which may not be correlated with a given import market share. In Professor Lyon's view, more work should be done on the likely response on firms outside a candidate market, and their ability to respond (particularly for industrial product markets where capacity is important). Other recommendations include the use of isochrones instead of national borders where possible, and a more consistent methodology to approaching transport costs as well as product distribution and vertical integration.

14. The Chair turned to the **United States** to ask what it means when it defines a geographic market as the United States. The United States' delegation responded that a national market definition means they find that either the suppliers in the relevant market are located in the United States, or the customers are located in the United States. First, US agencies consider how products are priced – if a supplier can price differently based on location (i.e. price discriminate), they will consider this in narrowing the relevant market. In other cases, the agencies will look at the location of suppliers (e.g. for coal mines, they will consider whether a single firm owning all US coal mines would be able to raise prices). More generally, the agencies will look at a variety of factors affecting the conditions of competition, including the importance of a local sales force and distribution network that could disadvantage a non-US producer, price setting procedures (e.g. for cars, prices are negotiated, so the authorities will take into account every supplier that can supply US consumers) and the possibility of arbitrage.

15. The United States then described two cases touching on these issues. The first, a monopolisation case in the pipe fittings market, involved the consideration of whether foreign suppliers should be included in the market. The US Federal Trade Commission ("FTC") found domestically manufactured pipe fittings were interchangeable with imported ones, but consumers had a strong preference for domestic products, so it defined the market as a domestic one. In the proposed merger between Sysco and US Foods, the question was whether there was a national or a local market. The FTC alleged both, and that one subset of customers had needs for national supply (these customers preferred purchasing from a broad-line distributor that could service all of their locations across the country with consistent products and services). The FTC alleged that the merging parties were the only firms with such a network, and the court agreed, issuing a preliminary injunction, causing the parties to abandon the transaction.

16. **Australia** then took the floor to explain the ACCC's rationale for defining a geographic market as Australia, even though imports may be substitutes for domestically produced goods. The Competition Act ("Act") defines the market to be Australia or an Australian state, and while the ACCC have taken the view that a market can be broader, this question is in litigation before the courts. In addition, the Act sets forth the factors that the ACCC should consider when reviewing a merger, and these include potential imports as part of the assessment and not the market definition. Australia expressed the view, supported by its courts that the purpose of market definition is to identify the range of substitution possibilities. In Australia, transport costs and exchange rate fluctuations as well as regulatory requirements can have a significant impact. While there may be some imports that do constrain domestic competition, this link can be somewhat tenuous in nature. For example, in the merger of the only two steel manufacturers in Australia, there was a specific analysis of imports pressure in the competitive assessment rather than in the geographic market definition.

17. The Chair noted that, consistent with Professor Lyons' observations and the interventions, geographic market definition can be a tool for considering competitive effects. The Chair then asked **Israel** to describe its approach when it determines that price discrimination is not a significant factor. Israel noted that their contribution was based on its approach to local markets. It follows a three step approach. The first step is defining a catchment area. When suppliers cannot discriminate among customers, it is common practice to define catchment areas around suppliers. In this case, the catchment areas represent where the demands for suppliers' products comes from, meaning where customers are located. Israel defines catchment areas using a special cut-off in terms of travel time or distance, depending on the market. Taking into account a range of consumer factors, the authority determines a number of catchment areas. For example in the retail/food market, they used three store size groupings and two population density groupings to define six catchment areas. The second step is to determine the set of suppliers competing within each catchment area. When firms cannot discriminate among different consumers, they consider either travel time or the degree of overlap in catchment areas to determine the range of competitors for the firm in question (it is assumed that the greater the overlap, the closer the competitor). After defining the geographic market using catchment areas, and the set of competitors in question, the authority computes concentration indicators, including market shares, to identify potential competitive issues.

18. The Chair asked **Argentina** to describe one of its geographic market definition tools described in its submission – the "openness index". Argentina explained that the openness index is a ratio of imports plus exports divided by domestic production, which demonstrates whether a product is internationally traded (i.e. the openness of a market). This tool has been used for both geographic market definition and competitive assessment in conjunction with a range of other factors, although there is no established threshold for competition issues (under 50% may potentially indicate a national market, but not in all cases). These types of cases are a challenge in Argentina because they must consider also regional definitions (e.g. Mercosur) rather than simply national or global. Defining a geographic market too narrowly could involve risks, such as preventing the assessment of mergers between Brazilian and Argentinian firms, since a national market definition would not catch the horizontal effects of such a merger, as was seen in the petrochemical industry for example. Argentina noted they also face challenges regarding whether to consider a given piece of evidence in competitive assessment or geographic market definition.

19. **Mexico** was requested by the Chair to describe how, in a merger involving a satellite services provider, licensing requirements affected the determination of the geographic market. Mexico explained how the license granted by the Mexican government established the geographic scope of the satellite services that could be provided. Thus, the market was found to be national because the operator was able to provide services anywhere in Mexico, as specified in the license.

20. **Indonesia** then elaborated on how company policy was a determinant of geographic market definition. Indonesia explained that company strategy in terms of the geographic scope of their sales activities is considered, in combination with other tools to reach a geographic market definition. The time dimension of supply substitution should be carefully considered. For example, with respect to soybeans, the competition authority found that a consumer will use only local soybeans until local beans run out, at which point the consumer will begin to purchase imports. Thus, the authority defined local and imported soybeans as separate markets. With respect to transport costs, Indonesia noted that in a recent case, the competition authority found that as long as a good can reach a geographical market and still be competitive with local products, its supplier could be included in a broader geographical market.

21. The Chair then asked **Belgium** to explain the term "isochrones" and describe how they were used in recent cases. Belgium explained that an isochrone is a line delimiting a catchment area for a point of sale based on a given level of travel time. Travel time is often more important than the distance of the consumer to the location, so isochrones are generally more useful than catchment areas drawn based on a given distance. Isochrones represented 80% of the revenues for a given retail location in the Ahold/Delhaize merger and, in the Kinepolis case, 80% of the total number of clients.

22. **New Zealand** was asked to describe how geographic markets might be affected by factors such as the state of the roads, traffic flows, the level of motor vehicle ownership and the population density of different parts of the country. Each of these factors are relevant to demand side substitution in local retail markets such as those for supermarkets and petrol. New Zealand noted these factors were used in a case involving supermarket retailers, wherein there was a duopoly with both incumbents seeking to acquire the new entrant. In cases involving mergers of supermarkets or chains of petrol stations, the relevant markets at a retail level are a series of local markets, determined based on demand side substitution. New Zealand noted that the competition authority has in some cases not defined each geographic market, but instead developed a filtering approach, based in part on 5 km radius around grocery stores and 2 km for petrol retailers. These filters are used as a starting point, based on calculations regarding the cost trade-off between a small but significant no transitory increase in price (SSNIP) on groceries relative to the cost of travel, as well as other sources of company and market information.

23. **Korea** explained how the KFTC conducted consumer interviews to determine the degree to which markets for soju (a local alcohol) were regional. In this case, the KFTC imposed structural remedies despite the fact that the acquisition would result in a national market share of less than 50%. This was due to the fact that the acquired company had a market share of over 80% in certain local markets. The KFTC used cross-price elasticity analysis, but factory prices for soju increase at the same time every year, so it was difficult to calculate elasticities in a reliable way. As a result, the KFTC used a consumer survey conducted by an outside organisation. In 2004, Gallup Korea selected a random sample of 1,000 participants, which were asked about their consumption of soju and how they would change their choice if the price increased by 5%, 10%, 15% and over 20%. The survey found that most consumers are loyal to regional soju brands, and that a regional company could increase their profit with a 10% to 20% price increase. This contradicted the findings of the KFTC's preliminary SSNIP test which found that a 5% price increase would not be profitable (and which would thus indicate that the regional market definition should be broadened).

24. The Chair then turned to **Hungary** to describe the evidence used in the assessment of geographic markets in the FastTrack/Ipress merger. Hungary noted that there was not one single piece of crucial evidence used to define the geographical market in this case, but rather a range of evidence. The competition authority found that three types of evidence were more reliable than others: buyers' responses to the entry of foreign goods, quantitative data from domestic and foreign companies on their spare capacity (and how they assessed foreign pressure on domestic market players), and an economic analysis of transportation distances. In this case, the GvH found several large foreign printing companies near the Hungarian border with spare capacity, so they determined that the merging parties did not have strong enough market power for the merger to cause anticompetitive harm.

25. The second part of the roundtable focused on challenges in defining geographic markets, particularly in the framework of globalisation. The Chair turned to **Dr Jorge Padilla** to discuss the pros and cons of SSS. Dr Padilla indicated that he disagreed with the notion that SSS is a question of fast low-cost entry. Rather, he noted that entry analysis is done on a company by company basis, and the implication of entry analysis is a change in market structure within a market. By contrast, SSS is not examining the possibility of entry on an individual company basis, but rather whether companies located in a market outside the putative market should all be part of this market – in other words, it involves changes in market scope rather than the structure within a market.

26. To illustrate this point, Dr Padilla proposed two options regarding the computation of market shares with current imports. First, the capacity of a firm that currently imports into a market can be included. He noted that it is very difficult to measure available capacity to serve a market. Dr Padilla noted that, in his experience, this exercise tends to lead to an underestimation of the competitive pressure exerted by the importing firm because competition authorities tend to focus on actual imports rather than overall capacity to serve a market, which therefore produces a bias against domestic mergers which may be unfairly prohibited and facilitate cross-border mergers.

27. The second option is the definition of a wide geographic market that includes all firms locally and internationally. This could over or underestimate the market position of domestic firms, by bringing in firms that do not compete in the domestic market, which dilutes market shares in a way that may not reflect their true competitive position. This may produce a bias against cross-border mergers because the competitive constraints of foreign firms may be overestimated, and be biased in favour of domestic mergers.

28. Dr Padilla opined that none of these two options is perfect – there is a risk of either false positives or negatives. In general, he stated that the aggregation of geographic markets should occur if it is found that this will produce market shares that more accurately represent the competitive position of the firms being investigated. A first necessary condition for aggregation is that the candidate for aggregation includes all firms that compete in the putative market (near universal substitutability) – this ensures all companies in the market impose a competitive constraint. Dr Padilla observed that this illustrates the point that SSS is not a company-by-company analysis, but rather considers whether an entire market should be included. This necessary condition is not sufficient, since (assuming price discrimination between domestic and foreign consumers) it could unnecessarily dilute domestic firms' market share by including overseas consumers for which they do not compete, thus leading to a risk of under enforcement. Thus, a second condition is that both domestic and foreign firms compete for the same consumers both domestically and in the foreign jurisdiction.

29. These two conditions for market definition can be translated into discussions of SSS. In Dr Padilla's view, SSS should only be taken into consideration if three conditions hold: 1) firms not competing in domestic markets can begin to do so in a costless way; 2) every firm in the market should impose a competitive constraint on the candidate market (otherwise you will not accurately reflect the competitive position of domestic firms); and 3) symmetry is required in terms of competition for consumers in both parts of the market.

30. Dr Padilla thus posited that the way forward is to refine the first option, and calculate capacity shares, which is challenging but could be undertaken with sufficient data. The other approach is to consider imports in competitive assessment. In Dr Padilla's view, the market should be widened (according to the criteria described earlier) only when this is clearly the case. Otherwise, authorities should focus on calculating the constraints imposed by individual companies exporting into the relevant market in the competitive assessment.

31. Dr Padilla closed by noting that his analysis assumes price discrimination, and observing that a lack of price discrimination may mean a wider market. But in the digital world, care must be taken when considering price discrimination. In particular, price discrimination may be endogenous, since a merger may affect the profitability of price discrimination, thus there may be no price discrimination pre-merger, but the merger may make price discrimination profitable). Especially cross-border transactions may change price discrimination patterns. He added that price correlations and price co-integration analysis is not helpful in addressing these issues, because correlation may have nothing to do with constraints that some firms impose on others – especially when firms are in the middle of two markets communicating pricing pressures between them. Finally, Dr Padilla noted that his observations apply to both mergers and assessments of dominance.

32. The European Commission asked Dr Padilla whether he agreed that, in the case of the second option he presented (broad geographic market definition), the degree of imprecision will increase as the proportion of firms not present in the candidate market increases. Dr Padilla agreed, and noted that the first option (considering import capacity only) has fewer difficulties than the second option. In particular, a broad geographic market definition would be problematic unless there is near universal substitutability and symmetry. He noted that this is consistent with the observations made by Professor Lyons.

33. The Chair then asked **BIAC** to describe emerging market trends that pose challenges for geographic market definition. BIAC noted that one particularly important trend is that of digital markets: with the activity of digital platforms, transactions involving filings in ten jurisdictions or more are common, so there is a need for consistency between jurisdictions in the analytical process. BIAC also noted there is a question of how online sales in a physical market should affect market definition (i.e. should online sales suggest a broader market definition?). In addition, when considering mergers between platforms (e.g. Uber), local competition (e.g. taxis) should also be considered. BIAC observed that one benefit of platform markets is that they provide a great deal of data, and the delegate expressed the view that competition authorities should rely on data and economic analysis to tackle some of the challenging economic questions with respect to geographic market definition (including performing price analysis).

34. **Ukraine** then described its experience with geographical market definition, noting that the issues of geographical markets have arisen in both unilateral conduct cases and merger cases. The competition authority has for instance looked at different sets of market definitions in the pharmaceuticals sector: retail, wholesale and manufacturing. The authority found that the geographical market differs based on distribution channels, and is influenced by different administrative or regulatory barriers.

35. **Lithuania** described the challenges of obtaining data abroad when investigating geographic market definition and relevant imports. It noted that while there is an EU mechanism for obtaining information abroad in antitrust cases, no such mechanism exists for merger cases. Lithuania indicated that it has one to two significant cases per year that require such information. There are two ways in which the competition authority attempts to obtain this information: 1) contacting competition authorities in other countries, although there is no legal framework in many cases for obtaining such information; and 2) asking foreign firms directly. In the latter case, the competition authority often speaks with the firms over the phone, and has been able to gain helpful information in writing on the basis of limited, clear questionnaires, and frequent reminders.

36. **Romania** then described how certain factors lead to a national market definition, even as globalisation has come to affect many markets. For instance, in a recent information technology and communications sector merger, the factors considered in favour of a national market definition were: transportation costs and transportation time; border controls (since Romania is not in the Schengen Area, there can be time-consuming border checks); payment methods (in Romania, most online shopping is paid on delivery, so this is a barrier to entry for many online retailers that usually use online electronic payments); and product warranties (often there is no local Romanian subsidiary for a seller, so consumers must package items and send them elsewhere, again incurring transportation costs). Romania indicated that it looks at these dynamic problems on a case by case basis.

37. **Spain** has assessed geographic markets related to online portals (two-sided markets) in two recent cases: a merger between online classified ad hosting services, and online management services for meal delivery services. The competition authority found that the geographical scope differed between the two sides of the market in these cases. For instance, in the meal delivery services merger, the authority found that the geographic scope of restaurants from which consumers would obtain their food was local, but the geographic scope of online delivery platforms (whose clients were the restaurants) was national because these platforms competed uniformly across the country. In particular, all online platforms offered the same conditions to all restaurants, advertised nationally and had a single national website.

38. **Argentina** then asked Dr Padilla to comment on the need for co-operation between competition authorities with respect to 1) the exchange of information to quantify export capacity; and 2) enforcement efforts when two firms merge in a jurisdiction and they are major exporters to another jurisdiction. Dr Padilla agreed that data sharing is important to improve the quantification of the capacity of a foreign market available to serve the domestic market. The Chair noted that not only co-operation, but the statutory ability to share information, is necessary.

39. The Chair turned to **German**y to discuss how geographic market definition can be approached for digital platforms. Germany noted that it has faced claims of global geographic market definition in digital sectors, including with respect to two-sided markets where the geographic market definition may be different in the different sides. The German competition authority has created a think tank to deal with these issues. The think tank has published a paper finding that the traditional market definition tools can deal with digital markets, focusing on preferences and switching possibilities for consumers. Germany has used those tools in the Facebook and hotel booking cases as well as in mergers in real estate, dating and ticket market platforms. Factors considered with respect to a potentially national market were often based on consumer preferences and behaviour, characteristics of the service (including country orientation), language, contractual conditions (i.e. whether the same conditions were offered in Germany as those offered to consumers elsewhere), the top-level internet domain (domain DE, in the case of Germany), the existence of national branch offices of a company, target groups for advertising and marketing activities, and the presence of local-only competitors.

40. **Japan** described a case involving online travel reservation services in which the competition authority defined the relevant geographic market as “all regions of Japan.” The Japanese delegate noted that the reason for selecting Japan as the geographic market was due to language, since the number of Japanese customers consulting sites in other languages was limited.

41. The Chair then asked **Chinese Taipei** to describe its approach to geographic market definition in a case in the online advertising sector. Chinese Taipei noted that its general rule for geographic market definition is focused on demand substitution. Depending on the features of the goods or services in question, the competition authority may also consider supply substitution. Typical factors considered in geographic market definition include: pricing variations in different regions, shipping costs and trading costs, convenience, and the views of market participants regarding who their competitors are. In the advertising market, Chinese Taipei observed that, although the internet is borderless, the purpose of a firm to use online advertising is to attract a target market. So the competition authority considered the distribution, habits and cultural background of the target audience, and found the relevant market was Chinese Taipei due to language and the frequent use of slang words in Chinese Taipei.

42. **Sweden** discussed a case involving abuses of dominance in the stock market. The delegate noted that after the implementation of the EU Marketing Financial Instruments Directive, there was an increase in competition in trading venues, with trades taking place across Europe and arbitrage between venues. This suggested to the Swedish competition authority that the relevant geographic market was Europe. While there were some advantages to trading venues of being located in Sweden to serve certain customers, this did not affect the definition of the geographic market (it was however taken into account during the competitive assessment). Differences in time zones and the regulatory environment meant that geographic definition broader than Europe was deemed inaccurate.

43. **Russia** then described how, in general, its approach has been to define markets as national even if internet technology can reduce cost spreads and incur zero transport costs. For instance, in a recent digital platform case, the competition authority determined that language barriers would support a national geographic market. Other relevant factors include any barriers in the acquisition of goods outside a market (such as custom clearance delays and costs, and certification rules), and the important role that common operating systems play in the definition of markets.

44. **India** asked about how geographic market definition would be affected by big data analytics that allow firms to tailor their products to a very granular level, making perfect price discrimination a possibility. Dr Padilla noted that the question is relevant for both geographic and product market definition, and that price discrimination could have a significant impact on shaping market definition. However, the possibility that the pricing policy of firms may change after a merger should also be kept in mind. In addition, if markets are to be defined on the basis of pricing policies, it should be first determined whether these policies are a company-level phenomenon or a market-wide phenomenon. Following on these remarks, the Chair asked whether, in an environment of perfect price discrimination, a market could be reduced to a single consumer. Dr Padilla responded that consumers in such a scenario could be aggregated, but only if every company in the market was engaged in the same form of price discrimination (so there is a requirement for near universality and symmetry). However, this aggregation would be simply for convenience and should not affect the conclusions reached in analysis.

45. Russia asked about big data and the challenges faced by authorities in assessing the accuracy of information and expending resources to analyse it. The Chair noted that large volumes of data are a challenge faced by all competition authorities, and that it can in general be manageable but requires significant resources. Dr Padilla posited that, when there is an asymmetry of information with the advantage held by the private parties, the latter should have the burden of proof. Professor Lyons noted that authorities can require information to be provided in a useable form. He also noted with respect to price discrimination and individualised prices that the key factor should be the presence of competitive constraints – so authorities should ask what the alternatives are for a consumer who is facing individualised prices.

46. The Chair closed the roundtable by thanking delegates and observing that the discussion showed a degree of commonality in terms of the issues that many authorities grapple with when dealing with geographic market definition. These factors include transportation costs, the presence or absence of arbitrage, information availability, the challenges of dealing with vast quantities of information, language barriers, and distribution channel issues. While several authorities take slightly different approaches, they have a common goal, which is for geographic market definition to feed directly into an analysis of competitive effects to assess whether or not a transaction or particular conduct is anticompetitive or should be cleared by an agency.