RICHARD WHISH: Hello, welcome to the second of the International Competition Network's teaching modules. This one is about market definition. Let's begin by introducing ourselves. My name is Richard Whish. I am a Professor of Competition Law at King's College in the University of London, and I've been teaching there since 1991.

Also, in my professional career, I was a partner and head of the competition law practice at a London law firm for nine years, and for six years, I was a non-executive director of the Office of Fair Trading. That is the competition authority in the United Kingdom responsible for enforcing the competition rules.

Adrian?

ADRIAN MAJUMBAR: And I'm Adrian Majumbar. I'm a partner at RBB Economics, a consultancy that specializes in the economics for competition policy. Prior to joining RBB, I was the deputy director of economics at the Office of Fair Trading.

RICHARD WHISH: Thank you, Adrian.

So, in this module, I'm going to introduce you to the idea of market definition and, in particular, when doing so, I'm going to explain what we mean by the so-called, hypothetical monopolist test, which is a test that is widely used around the world by competition authorities and professional advisors to companies when defining the relevant market.

I will explain the test in a theoretical sense, and then I will hand over to Adrian, who's going to explain to you the difficulties that can be experienced in practice when trying to define relevant markets and, more particularly, he's going to talk about the types of evidence that may or may not be available when it comes to market definition.

What we also intend to do in this module is to show you discussions among officials from various competition authorities around the world and they're going to talk about particular cases that they've experienced in practice and the kind of difficulties that they had to encounter.

I imagine that by now you've watched the first module in this series which talks about the

origins and purposes of competition law. You'll have seen there that competition law has a long history, quite a complex history, and you will have heard that many goals have been pursued in the name of competition law; for example, encouraging and promoting the interest of small and medium-sized businesses and also trying to improve economic performance generally.

But one recurrent theme that we see in competition law enforcement, particularly in the 21st Century, is the idea that competition authorities should be vigilant to prevent the abuse of market power. Market power is a central concept.

What do we mean by market power? A firm or firms have market power when they're able to increase their prices over a sustained period of time in a way that will be privately profitable to themselves. Another example of the exercise of market power is the reduction of output. Another example would be the degradation of the quality of products on the marketplace or the limitation of choice to consumers.

So, we need to understand what do we mean by market power. This module and the third one in the series deal with the concept of market power. In this one, we will try to define the relevant market. The next module will look in depth at how one identifies power over that market.

So, let us begin with market definition. Market power does not exist in the abstract. Market power exists in relation to a market. And when we discuss markets for these purposes, we mean firstly the relevant product market; secondly, the relevant geographic market. This module will try to explain how to go about defining both of these aspects of the market.

Let us think about market definition by reference to a simple physical product. Let's imagine a bottle of mineral water. What we are essentially asking ourselves is whether customers would consider that there are substitutes for the bottle of mineral water. Would customers, for example, think that a bottle of fizzy orange juice was a substitute for mineral water? Might they think that a sports drink was a substitute for mineral water? What about a pint of milk?

So, perhaps we could say that all non-alcoholic drinks are substitutes for one another. And, of course, it's possible that we could go even further. What about alcoholic beverages? What about beer? What about wine? What about spirits?

What we are trying to do in this process is decide how narrow or how wide the market is. Is it as narrow as bottled mineral water? Is it as wide as all commercial beverages?

We can think about geographical markets in the same way. Just imagine a construction company. A construction company has to buy building materials. It requires sand. It requires cement, building bricks, tiles to go on roofs. We have to ask ourselves when defining markets how narrow or how wide is the geographical market. For example, if I'm a construction company in an imaginary company called Arcardia and if I were to decide that the prices of building materials in Arcadia is too high, might I travel to neighboring Ruritania to buy my requirements? And if I find the prices there are too high, might I go further afield to Valhalla?

You can see here that we're embarked upon the same exercise of trying to decide how narrow or how wide the relevant market is.

So, what we have to do now is to think, how can we conceptualize the idea of a relevant market? One of the ways in which this has been done for many years is to think in terms of the hypothetical monopolist test. Let me explain what we mean by the hypothetical monopolist.

If we take a textbook example of a monopolist, a monopolist who is a rational profit maximizer, who wishes to earn as much as it possibly can, it will, of course, try to charge a monopoly price.

So, let's think about this in practice. Suppose that I am the only producer of widgets, and I would like to charge the highest price I possibly can.

Let's just have a think about this. So, we imagine the widget and then we imagine that I increase my price to what I consider to be the highest price that I can possibly charge. Let's see what happens.

In our example, I raise the price of widgets and my customers decide to buy blodgets instead. So, to put it very simply, would it be worth being a monopolist, the sole supplier of widgets? The answer, obviously, is no, because when I put the price up to what I wanted to charge, I lost my customers because they all purchased blodgets instead. In other words, it is not worth monopolizing widgets because I will not be able to earn a monopoly rent.

Now, let's repeat the experiment. Suppose that I'm the only supplier of widgets and blodgets. Again, I charge the highest price I think I possibly can command. Let's see what happens.

It's different, isn't it? This time, when I raised my prices, I did not lose my customers. They did not go and purchase sprockets. I raised the price of widgets and blodgets and I still was able to make a monopoly profit. In other words, it would be worth monopolizing widgets and blodgets. So, that is what we mean by the hypothetical monopolist test.

But the next question is, how should we actually do this in practice? Since the beginning of the 1990s, competition authorities around the world have decided that an appropriate way to think about the hypothetical monopolist test is as follows. Let's suppose I am the producer of widgets. Let's suppose that, at the moment, I'm charging a price of 100 per widget. Now, let's ask the following question. What happens when I apply a small, but significant, non-transitory increase in price? There you have the acronym, a SSNIP.

What happens when I apply a SSNIP? Let's imagine what will happen to my customers. Let's have a look. We discover that a response to a SSNIP causes a significant number of my customers to divert their purchases to blodgets. Enough customers switch from me to blodgets to make the price rise unprofitable. Well, in those circumstances, we can say that widgets and blodgets are substitutable for one another. In other words, they form part of the same relevant product market.

Now, let's repeat the experiment in relation to widgets and blodgets. Suppose I were to

increase the price of widgets and blodgets by a SSNIP, by 10 percent, what happens now? Let's have a look.

As we can see in this example, I have not lost significant customers to sprockets. In other words, the market is widgets and blodgets, but it is no wider than that. It does not include sprockets.

Let's just return to my earlier examples to make this a little bit more real. I started by talking about bottled mineral water, fizzy orange drinks, sports drinks. So, let's just apply a SSNIP to the bottled mineral water and see what happens. What happens if we apply the SSNIP to water and fizzy drinks? Can we possibly widen the market any further? You decide.

The same experiment can be applied to the geographical market. Let us imagine the construction company in Arcardia. What happened when prices in Arcadia were raised by 10 percent? In this situation, enough customers start going to Valhalla to make the price rise in Arcadia unprofitable.

Let's have another look what happened if prices

in Arcardia and Valhalla increase by 10 percent. Answer, Ruritania was too far away. Perhaps the transport costs of going to Ruritania were too high. Perhaps there were customs duties that made it impossible to bring building materials from Ruritania back into Arcardia and Valhalla. In this situation, we can now see that the geographical market consists of Arcardia and Valhalla, but nowhere further than that.

Let me add one other point about the SSNIP test. So far, I have been giving you examples, both in relation to the product market and in relation to the geographical market, where we have asked ourselves what would customers do in the event of a SSNIP. If the price of widgets were to be increased by 10 percent, would customers divert to blodgets? Would customers in Arcardia divert to Valhalla?

There's one other issue that might be worthwhile considering, and it's the question of so-

called supply side substitutability. If we're asking whether customers would switch from widgets to blodgets or from Arcardia to Valhalla, we're looking at demand side substitution. However, one can envisage a possibility in which on the supply side, let's imagine a producer of widgets and a producer of blodgets. It may be that the customers do not consider widgets to be a substitute for blodgets or blodgets to be a substitute for widgets.

However, we might observe the following behavior. If the price of widgets were to be increased by 10 percent, perhaps the producers of blodgets would decide to switch their production to widgets. In that case, we have to ask the question, might widgets and blodgets be regarded as part of the same market, even though from the demand side, the evidence tells us that that is not the case. In other words, can we use supply side substitution to broaden the product and the geographical markets?

Now, it has to be said if we look at different competition authorities, this subject is not treated the same way in all jurisdictions. It would be possible to treat supply side substitution simply as a matter of potential competition. Are there people outside the market who could enter the market? However, in the European Union, for example, as is evidenced by the European Commission's notice on market definition of 1997, there are circumstances in which supply side substitution might be so plausible, so credible, so immediate that it would be possible to broaden the market to include supply side substitutes.

And we can think about this through the SSNIP test as well. Suppose A were to increase the price of widgets by 10 percent. Would producer B decide to start producing widgets in place of the blodgets that he produces at the moment?

HERBERT FUNG: In the SISTIC case, the incumbent ticketing service provider in Singapore was found to have abused its dominant position through a series of exclusive dealing agreements with event promoters and venue operators. We adopted a pragmatic approach to overcome the difficulties in complying the conceptual framework of market definition. In the

infringement decision, we defined the relevant market as the provision of open ticketing services in Singapore to both event promoters and ticket buyers.

The important point here is that competitors in this market are able to flexibly cater for the ticketing needs of a wide variety of events, such as pop concerts, musicals and sports events.

To illustrate the idea, our railway operators will sell train tickets, but obviously, the system is unable to sell concert tickets.

One issue we dealt with was whether cinema ticketing is a supply side substitute; in other words, whether the cinema operators will start selling concert tickets in response to a price increase. As expected, we did not have perfect data to apply the SSNIP test strictly. Instead, we set out some key principles in defining the market in a practical sense.

First, we made it clear that since this is a unilateral conduct case, only one-way substitution is relevant. In other words, whether SISTIC is able to sell movie tickets is irrelevant. The crux of the matter is whether the cinema operators can sell concert tickets, because this is where the potential competitive constraint upon SISTIC would be coming from.

In the end, evidence from the cinema operators such as (inaudible) they were neither able nor willing to enter into the open ticketing business and their reluctance was so strong that it’s clearly not a matter of price. We also noted that for more than 15 months after SISTIC has raised its booking fees by 50 percent, none of the cinema operators actually entered the market. Based on these facts, we dismissed cinema ticketing as a substitute.

RICHARD WHISH: Before I go any further with explaining how we define markets in practice, let me just enter one note of caution, and it’s a very important one. Market definition is not an end in itself. Market definition is a means to an end. It is part of a process, but it is not an object in its own right. Let me illustrate this point.

Let’s suppose that we can define the relevant market perfectly. We can look at it figuratively by imagining this circle. That circle is a perfect definition of the relevant market in our case. It’s a

useful piece of information, in particular because we can assign market shares to the different undertakings who produce goods or services within that relevant market.

So, let's just imagine, undertaking A has a market share of 65 percent; B has a market share of 30 percent; C has a market share of 5 percent. Obviously, that tells us something. A apparently has a lot more market power than B and C. This is certainly useful information. What we can say is that market definition enables us to identify the most immediate competitive constraints faced by each of A, B and C.

However, it only requires a moment thought to realize this does not tell us the whole story of market power. And, remember, ultimately it is market power that we are concerned with.

Why does this market definition not tell us everything that we need to know? Well, what about firms outside the market who might be able to enter it? This gets us into a question of, for example, how high are the barriers to entry to this market? It may be that barriers to entry are very low, in which case it would be easy for other people to enter the market. On the other hand, if the barriers to entry are high, then that might suggest that a market share of 65 percent really does indicate a fairly reasonable degree of market power.

But at the risk of stating the obvious, we cannot assign a market share figure to firms that are not in the market. So, this is a very good example of the fact that market definition is a useful technique, but it cannot provide answers in itself.

There's one other limitation to market definition when it comes to determining the existence of market power, and that is we can look at three or four suppliers in a market, we can give them market shares. But this tells us nothing about the additional question, is there anyone on the buying side of the market with buyer power? In some markets, buyer power may be very influential. If one has a strong buyer who credibly can switch its purchases between a choice of A, B and C, for example, then that buyer power may be sufficient to countervail any power that the suppliers themselves otherwise would have in the market.

So, this is my way of explaining the hypothetical monopolist test. Specifically, this is to explain what we mean by the SSNIP test. But it's one thing to describe these things from the perspective of theory. Now we need to hear how can it be applied in practice. And at this point, I'm going to hand over to Adrian.

ADRIAN MAJUMBAR: So, I'm going to talk about some empirical techniques that we use in defining markets. In the interest of time, I won't be able to talk about every single technique that we use. However, I will try to talk about some of the most common techniques. I'll talk about the techniques themselves and also mention one or two limitations that we have to look out for when we use them.

The first point to mention is that in an ideal world, we would have perfect data. So, for example, Richard has explained the hypothetical monopolist as implemented by the SSNIP test. So, in an ideal world, we would see one price go up or a group of prices go up, while all other prices remained constant, and then we would observe the switching patterns from consumers and customers. In practice, of course, data are very rarely like that.

So, what does that mean? What it means is we have to do the best that we can with the data. We have to make sensible inferences, but also being aware that sometimes the data will not tell us everything that we ideally would like to know.

Where do we get the data? There are many potential sources of information. The most valuable source is quite often from the parties themselves. They may have, for example, surveys where they've asked their own customers why they purchase their products and indeed whether they would consider purchasing other products.

That potentially informs us about what characteristics are important to consumers who buy various products from the parties.

Another source of information could be the party's rivals, their competitors or, indeed, their customers. They may also have valuable pieces of information, industry reports, for

example, that you can use to gather evidence on substitutability. Other sources of evidence include trade bodies, perhaps there's government statistics, too, that could shed light on the industry. In some cases, you may have earlier decisions, perhaps in the same jurisdiction or even in other jurisdictions. And, finally, there may even be academic studies that shed light on the industry in question.

DAVID LEWIS: You've also got to be prepared to look for that evidence in some unexpected places. You've got to be creative about how you find that evidence because if you think you're going to find the kind of figures that allow you to do a textbook SSNIP test and derive at a number that will tell you where the boundaries of the relevant market are, you're going to be very disappointed. Because for the most part, that evidence doesn't exist. And if it did exist -- and in some cases they're tempted to use it -- if it does exist, it's going to be so -- take so long, it's going to be so resource-intensive to gather, that you're not going to be able to use it. So, you have to look for evidence in odd places.

ADRIAN MAJUMBAR: Turning to various types of empirical analyses that we may employ, perhaps the simplest is to consider functionality. That is to say what is the product that's being sold and why is it that consumers or end customers want that product or, indeed, service? Incidentally, I'm talking about products for convenience, but, of course, we refer here to products and services.

Knowing about the functionality of a product or its intended use is important in the sense that that helps us understand what motivates consumers to buy a particular product. Knowing that, we may also be able to infer what would motivate them to buy other products, substitute products. So, that information can be informative as regards possible switching behavior. However, without more information, we won't know exactly how consumers would switch in response to a price rise.

So, ideally, what we need is to observe a change in relative prices and then how

consumers react to that change in relative prices. We can then understand the extent to which consumers switch away from the products in question being looked at as part of the investigation to alternative substitute products. So, we need more data.

What kind of techniques might we use where we do have some data on prices or quantities and switching behavior over time? A potentially very powerful technique is what might be called impact analysis. Impact analysis takes a discrete shock to the market and it considers what happens after that shock and whether that sheds light on substitution patterns.

So, for example, the impact or the shock could be a price promotion. In that case, we would say, following the price promotion, did the promoted product gain sales substantially? And if so, from which other products did it gain sales?

Another shock could be new entry. When a firm enters a market, from which other products primarily does it win market share? That will then tell us which firms it competes with most closely.

Exit may also be informative. When a firm exits the market, which products gain share from the firm that existed? And, in principle, a temporary production outage would tell us the same information.

Now, I want to talk about some other -- some other types of evidence that one might use. Survey analysis is a natural way to assess situations where there's not much data available at the moment. So, for example, if the parties are not able to provide useful information on switching behavior, it may be that the authorities themselves have to go out and ask customers how they would behave in response to hypothetical price rises.

Now, on the one hand, this has the advantage of allowing the authorities to ask the questions that they would like to know. For example, how would you react if the price of product A went up? Would you switch to rival products B, C or D? The trouble is, because you ask a hypothetical question, the answers that you may receive are possibly not that informative because

consumers are not telling you exactly what they would do. They just are telling you what they think they might do. It's much better to have data on how consumers actually behaved in response to a price change.

Nonetheless, when there is no data available, a sensibly designed survey can be very useful as a piece of evidence that informs us on switching behavior.

Survey analysis could inform us both on product market definition, where we ask consumers whether or not they would switch to alternative products following a price rise, or indeed survey analysis could inform us about geographic market definition, whether customers would switch to different areas following a price rise in the area where they normally purchase.

Turning to the geographic market more generally, I'd like to mention just a couple of examples of empirical analysis that we quite often use. The first is what can be called the core catchment area approach. Here, we look at the firm's distribution patterns. So, for example, it may be that the firm delivers a particular product to its customers. We then ask the question, over what area does it distribute 80 percent of its products? That could be its core catchment area.

Now, it doesn't have to be 80 percent and the number will differ according to the case in hand, but the idea here is to understand really where the customer -- sorry, where the firm draws most of its customers from, that would be its core catchment area.

And then we ask the question, well, what other firms are able to compete either in that core catchment area or at least can access and tap a large share of that core customer area? That would then allow us to understand the most important competitive constraints on the firm in question. So, that would be informative to the relevant geographic market.

Turning to the next slide, I'd just like to mention another example of impact analysis, which can be particularly informative in understanding the relevant geographic market.

Now, on the chart here, what I've done is I've plotted profitability which is -- or, rather, the changing profitability following new entry on the vertical axis, and on the horizontal axis,

I've shown how far the new entrant is. So, the idea here is we want to know when this new entry against a particular firm, how close does that entry have to be before it impacts heavily on the profitability of the firm?

And what we see in this diagram is that when firms are within two kilometers, when new entry occurs within two kilometers of the firm in question, that has a marked impact on reducing that firm's profitability. However, when they enter further away, five or ten kilometers away, there's no noticeable impacts on profits.

What does that tell us? It tells us that the strongest competitive constraints are felt within around about two kilometers from the firm in question, which would help us then define the relevant geographic market.

A final point to watch is that the appropriate benchmark for applying a SSNIP depends on the type of investigation. If the question is, does a firm have market power, then conceptually, we should be thinking about a SSNIP imposed upon a competitive price. So, we ask the question, if the price increased above competitive levels by 5 or 10 percent, would there be substantial switching to other products? If so, then the firm in question potentially cannot increase prices above competitive levels or at least cannot do so profitably because it is constrained by other substitute products. That helps us answer the question of whether the firm has market power, the ability profitably to sustain prices above competitive levels.

However, if the question is, does this horizontal merger make things worse, does this horizontal merger increase market power or does this horizontal agreement increase market power, then usually the relevant question is whether prices are going to go up relative to their current levels. In that situation, when we apply a SSNIP test, we consider a SSNIP imposed upon the current price level. So, in that situation, evidence based on existing price levels can be quite informative.

So, the problem with the assessments of market power is, as I said, we need to consider a

SSNIP imposed upon the competitive price. However, if a firm already has market power, then it may well have increased prices above competitive levels so that any switching evidence or any pricing evidence that we may have takes place at prices that are already above competitive levels and, hence, we may observe much more switching to occur than would actually occur had the firm imposed a SSNIP on the competitive level. And that problem is known as the cellophane fallacy.

As a final point, I'd just like to emphasize what Richard has said, which is that really from an economics viewpoint, market definition is here just to help us understand the most important constraints on a particular product. So, it may be that in practice that we don't need to come to a final definition on the relevant market. It may be that having defined the market, either narrowly or widely, we still find that the firms in question are unlikely to have market power or that the merger in question is unlikely to increase prices further, for example.

In that situation, market definition can be left open simply because under alternative plausible market definitions, it's clear there's no competitive problem.

RICHARD WHISH: So, now you've heard from me describing the hypothetical monopoly test and, specifically, the SSNIP test, and you've heard from Adrian explaining some of the difficulties and pitfalls that can arise in practice when it comes to defining relevant markets.

Let's now listen to some conversation involving officials from competition authorities around the world. You'll hear from David Lewis, who, for ten years, was the chairman of the Competition Tribunal of South Africa. He was in conversation with officials at the Competition Commission of South Africa.

You'll also hear from Han Li Toh and Herbert Fung of the Competition Commission of Singapore.

So, first of all, let's hear David Lewis emphasizing the importance of defining relevant

markets in the specific country context in which they arise.

DAVID LEWIS: The issues that I really want to bring out, because I feel that from doing market definition on a wide range of markets, in a wide range of cases, what I've really learned is that although international evidence and international jurisprudence is useful and interesting, markets are really social constructs and that you have to define them by using evidence drawn from the country and the environment in which the market that you are interested in examining exists.

RICHARD WHISH: We will hear from David Lewis now and he's going to discuss market definition on a particular case that arose in South Africa some years ago.

DAVID LEWIS: And the first case that I want to refer to is a case that we did a long time ago in the alcoholic beverages market. It was a merger between two firms, Distillers and SFW, Stellenbosch Farmers Winery, two of the largest producers of spirits, brandy, whiskey, vodka, gin, other spirits, cane spirits, in the country. They're also large producers, particularly the target company, large producers of wine. And we had to work out the product market definition in this case.

And when we looked at the international jurisprudence, particularly cases from the U.S., from Australia, from the EU, if I remember, the way in which the market had traditionally been defined was by spirit type. In other words, whiskey was in one market, brandy was in one market, gin was in one market, vodka was in one market. And that was the -- if you'd like, the conventional wisdom on how you defined markets in those kind of -- in that segment of alcoholic beverages.

But when we looked at South Africa, we discovered a very different situation. And what we discovered there -- you know, when you think back, in retrospect, for obvious reasons, in South Africa, we're dealing with a very peculiar situation where the vast majority of the population, the black majority of the population, had until 10 or so years -- 10 or 15 years prior to

this merger, notionally not been allowed to -- not been permitted to drink spirits, to purchase spirits. They certainly had not been allowed to go into bottle stores and -- where spirits were sold and sort of peruse the shelves and decide what spirits they were going to buy.

So, we had, in South Africa, a very new and relatively unsophisticated market of spirits consumers. So, whereas in Europe and the United States and Australia, there was a very strong occasion-based drinking pattern where people would drink gin at lunchtime and whiskey before dinner and sparkling wine with their hors d'oeuvres and white wine with their fish, it was -- this did not exist in South Africa to anything like the same degree. People didn't have that sense of an occasion on which I drink one spirit instead of another spirit.

Also, what we found in South Africa, which was very interesting, and to a much greater extent than in the -- appeared to be the case in the European and American markets, was that South African spirits drinkers drank their spirits with mixers to a far greater extent than anybody else. And, so, it didn't really sort of matter as much whether you were drinking your Coke with brandy or you were drinking your Coke with whiskey because really what you were, for the most part, tasting was the Coke.

And, so, there was -- again, that muted the notion that the market was a spirits-type market. And that was the -- if you like, the second big distinction between drinking habits of spirits consumers in South Africa and spirits consumers elsewhere in the world.

But what we did notice was that -- also, I should say about South Africa, some interesting surveys that were done by, in fact, the merging parties themselves in a market study revealed that South African consumers -- and this is completely predictable when you think how little they had -- what a short length of time they had been in the market -- did not associate brands with spirits to quite the same degree as one might imagine today. So, people were not sure that Smirnoff was a vodka or that Martell was a brandy or that Johnnie Walker was a whiskey. They tended to just think of them as spirits. And those key facts really distinguished the market.

But what we did notice was that spirits were in three distinct price segments. There were the -- what they called the premium spirits, which were the high-priced imported spirits. There were the -- what they called the proprietary spirits, which were the popular brands, the middle -- mid-income, if you'd like, priced brands, and then there were the -- what we'll call the value for money brands. And all -- each of them had a -- their representative gin or vodka or whiskey or brandy brands.

Another very unusual thing about the South Africa market was that we are one of the largest consumers of low-priced brandy in the world. In other parts of the world, brandy tends to be an expensive cognac drink, in most other markets of the world, whereas in South Africa, it's the largest consumed brandy.

And what we did see, again, from market surveys that the merging parties themselves had done, is that customers were price sensitive as between these segments. They were not particularly price sensitive as between the spirit brands within the same segments. They would drink pretty much -- you know, if one price went up, they would drink another, but within the same -- choose another spirit within the same segment, that they were sensitive between the segments.

So, instead of defining the market there as a spirits-type market, we ended up defining the market as a price segment market. We defined the market into three distinct pricing segments. And in the end, we found that the -- there was a possibility of a substantial listing of competition, particularly in that important middle segment of the market. And, so, what we got -- we permitted the merger, but we did so on condition that selected powerful brands were sold off to parties that were not involved in the merger.

RICHARD WHISH: And, now, let's hear from Herbert Fung of the Competition Commission in Singapore. He is going to talk about the particular problems of defining relevant markets in the context of an economy such as that of Singapore.

HERBERT FUNG: Singapore is a small and open economy. This means market definition is especially important in our competition assessment. This is because in terms of the product market, a small domestic market size implies that competition often takes place at the inter-brand level, while bigger economies might be more able to accommodate intra-brand competition, which tends to be more straightforward in terms of market definition.

As for geographic market, many of our local companies would venture overseas, while at the same time our open trade policy implies that they also face competition for important goods and services. These are important issues we have to consider when we define markets.

RICHARD WHISH: One point that Adrian and I did not make in our earlier presentations was that markets develop over time and one cannot assume that the way in which a market should be defined today will be the same as it was perhaps five years ago.

Let's listen to an official from the Competition Commission of South Africa on this point.

FEMALE OFFICIAL: Just to pick up on what was said earlier in terms of the change in a particular market over time might not be as drastic as the ICT sector. I think, in my experience at least, for instance, in the steel -- and I think (inaudible) could speak to this, too -- is that we typically would have defined the steel market as a regional market because it's so heavy to transport it over long distances.

But in recent times, if I'm not mistaken, I think like a company like Mittal have adopted like a national delivery strategy where irrespective of where the steel is being delivered into South Africa, the price is uniform and that one would see a change in how the dynamics of the market have changed from a regional market that we would typically have defined in the steel market to almost a national market because the behaviors of pricing have changed in the steel market.

So, it's not that you could always rely on jurisprudence, but that you should really look at

the time when you're litigating the transaction.

RICHARD WHISH: A final point is that in some jurisdictions, market definition is also relevant when it comes to determining the level of penalty which would be imposed for infringements of competition law. Let's hear from Han Li Toh of the Singaporean Competition Commission on this.

HAN LI TOH: So, in a typical competition law enforcement case, market definition serves two main purposes; firstly, to establish liability and, secondly, in a calculation of financial penalties. In terms of liability, market definition provides the framework within which the effect of the anti-competitive conduct of the merger can be measured. In terms of penalties, market definition draws a boundary of relevant turnover on which the penalties can be calculated.

When assessing the seriousness of the infringement, in calculating the penalties in the case of an anti-competitive agreement, we will examine a number of factors, including the market share of the parties to the anti-competitive agreement. The higher the combined market share of the parties, the greater is the risk of the anti-competitive agreement to cause damage to the affected market. Entry barriers to relevant market would also be considered. The higher the entry barriers, the more serious would be the effect of the anti-competitive agreement as the cartelist would be insulated from new entrants who could enter the market to undercut the cartel price.

The relevant turnover is the turnover of the business of the undertaking for the relevant product and geographic markets affected by the anti-competitive agreement. In determining what is the relevant turnover, the market definition is key.

RICHARD WHISH: So, that concludes our module on market definition. But let's just pause for a moment to reflect on what we hope you've learned in the course of this module.

The first point that we stressed is that market definition is a tool. It's a means to an end. It is not an end in itself. Ultimately, the really important question in any particular case is does a

firm or do firms now or will they in the future have market power.

The next point that we have explained is that when we define markets, we have to define both the relevant product market, but also the relevant geographical market.

When thinking about market definition, we do so in terms of the hypothetical monopolist test. In practice, this specifically means that we ask what would happen in the event of a SSNIP, a small, but significant, non-transitory increase in price.

Adrian talked to us about various empirical techniques that are used when defining relevant markets. In particular, for example, he told us about impact analysis. He also explained the usefulness of considering the functionality of any particular good or service.

We heard from officials from competition authorities in South Africa and Singapore and they described and discussed various specific issues that have arisen in their own particular country contexts.

So, that concludes the module on market definition. Hopefully, this will be a useful introduction to the next module in which we examine market power. Thank you.