



Wholesale and retail tariff regulation: defining an appropriate margin squeeze test

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1. Margin squeeze tests in Europe with an ex-post view

2. Margin squeeze tests in Europe with an ex-ante view

3. Review of some margin squeeze tests performed by African Regulators in mobile markets

Margin squeeze test are used in Europe to assess an abuse of dominant position



- The margin squeeze test enables to demonstrate an abuse of a dominant position (infringement to the article 102 of the Treaty on the Functioning of the European Union - formerly art. 82 of the Treaty on the European Community)
- The margin squeeze is defined as follows:

“A dominant undertaking may charge a price for the product on the upstream market which, compared to the price it charges on the downstream market, does not allow even an equally efficient competitor to trade profitably in the downstream market on a lasting basis (a so-called ‘margin squeeze’).”

Source:

Communication from the Commission — Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings
[2009/C 45/02]

Performing a margin squeeze test compliant with European Commission Guidelines dated 2009 requires a 3-step methodology

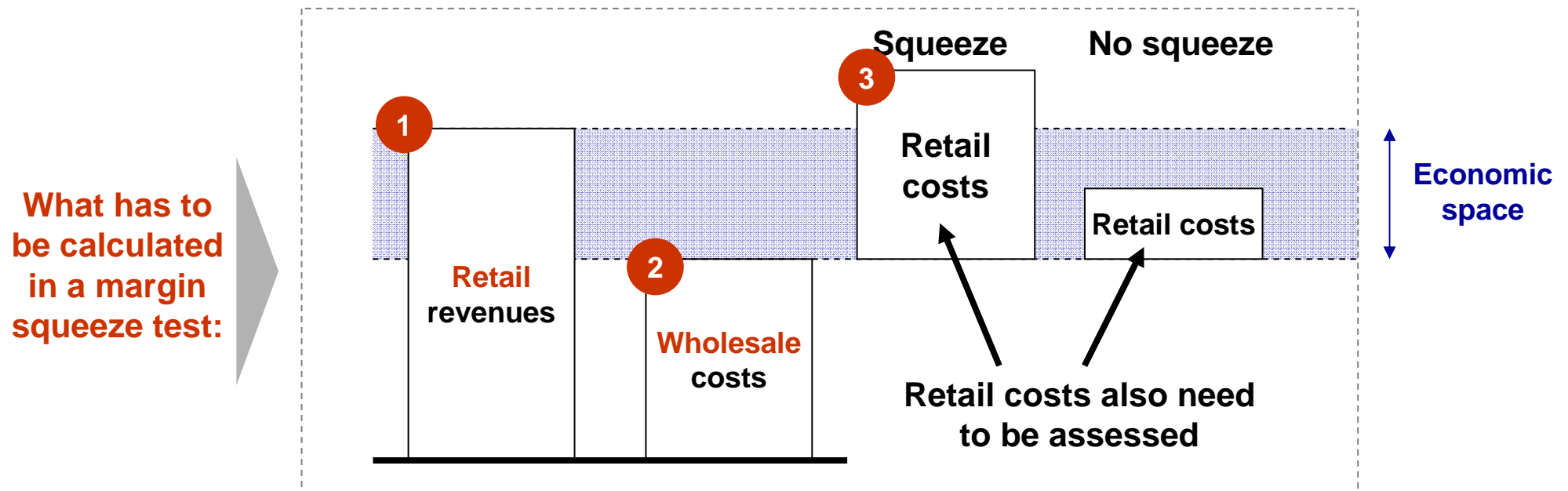


- 1 **Retail revenues** for the given retail activities
- 2 **Wholesale costs** required by the given retail activities

The difference between the two values is called the “**economic space**”

If there is an “economic space”, it has to be compared with the retail costs in order to determine if the space is sufficient

- 3 **Retail costs:** retail costs have to be estimated for the given retail activities



Applying in practice a margin squeeze test method implies to answer 5 questions



1	Equally or Reasonably Efficient Operator?	<i>The squeeze test can be conducted either considering the costs of the incumbent (equally efficient operator) or the costs of an efficient alternative operator (reasonably efficient operator)</i>
2	Static or dynamic model?	<i>A margin squeeze test can be conducted either estimating the costs and revenues of an “average year” (average yearly margin method) or estimating and discounting all future cash flows (discounted cash flows)</i>
3	Product by product or portfolio?	<i>The analysis can be done testing every product separately or studying a basket of products</i>
4	Strict or extended costs & revenues scope	<i>The margin squeeze test can include only one specific product or also associated revenues i.e. authorising cross subsidies (ex : subscription only or subscription + communications)</i>
5	AAC, AVC, LRAIC or ATC costs ?	<p><i>The evaluation of the costs can be based on :</i></p> <ul style="list-style-type: none"> - <i>The average avoidable costs</i> - <i>The average variable costs</i> - <i>The optimized average incremental costs</i> - <i>The average total costs</i>

Decisions of the European Commission on margin squeeze



- The European Commission has investigated margin squeeze allegations in four formal decisions :
 1. *Commission Decision of 29 October 1975 adopting interim measures concerning the National Coal Board, national Smokeless Fuels Limited and the national Carbonising Company Limited, known as National Carbonising case*
 2. *Commission Decision of 18 July 1988 relating to a proceeding under Article 86 of the Treaty of the EEC Treaty, Napier Brown vs British Sugar*
 3. *Commission Decision of 21 May 2003 relating to a proceeding under Article 82 of the Treaty, Deutsche Telekom AG*
 4. *Commission Decision of 4 July 2007 relating to a proceeding under Article 82 of the EC Treaty, Wanadoo España V. Telefónica*
- Amongst these four decisions, two describe the method of a margin squeeze test in the **broadband market**:
 - *The **Deutsche Telekom** case*
 - Margin squeeze Local Loop Unbundling / Retail Access Products
 - *The **Telefónica** case*
 - Margin squeeze Bitstream products / Retail Access Products

Margin squeeze test in the Deutsche Telekom case



	Test specifications	Justification
1	Equally Efficient Operator	<i>The vertically integrated operator knows only its own cost structure and cannot assess the cost structure or the customers base of an alternative operator</i>
2	Static model	<i>No justification</i>
3	Portfolio	<i>The use of EEO implies the use of the same portfolio of products than the vertically integrated operator</i>
4	Strict costs & revenues scope	<i>The EU regulation prevents cross subsidies between subscription and communications</i>
5	LRAIC	<i>The Guidance on the Art. 82 integrates the use of LRAIC</i>

Margin squeeze test in the Telefonica case



	Test specifications	Justification
1	Equally Efficient Operator	<i>Jurisprudence of the European Commission</i>
2	Static & dynamic model	<i>Dynamic models can be used in a growing market but can also include methodological limits which lead to a false-positive result</i>
3	Portfolio	<i>In its decision making process, a new entrant wants to deploy a full range of products</i>
4	Extended costs & revenues scope	<i>No justification</i>
5	LRAIC	<i>Economic theory and jurisprudence of the European Commission</i>

Conclusion on margin squeeze tests from an ex-post view



	Telefonica case	Deutsche Telekom case	Best practice
1	Equally Efficient Operator	Equally Efficient Operator	Equally Efficient Operator
2	Static & dynamic model	Static model	
3	Portfolio	Portfolio	Portfolio
4	Extended costs & revenues scope	Strict costs & revenues scope	
5	LRAIC	LRAIC	LRAIC

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According to the ERG, the choice of the margin squeeze test can be a lever to facilitate the entry of new actors in the market

- In its Common Position on Remedies (ERG 06 33), the ERG describes the case where the NRA could lever on the cost reference (dominant or alternative operator) to facilitate the entry of new actors :
 - *“The dilemma is this: If there are genuine economies of scale in the provision of [the product in the downstream market], it will at first sight be less efficient for [the product in the downstream market] to be provided by multiple suppliers. The product may be a natural monopoly. On the other hand, multiple supply will often give rise to dynamic efficiency gains which benefit consumers in the long run. And where the competitors each have scale which is above the level at which economies of scale are substantially exhausted, there should be considerable benefits from competition. The ideal outcome would therefore be a sufficient number of competitors to generate substantial dynamic efficiency benefits but not too many so that none can benefit from economies of scale. The NRA cannot possibly hope to ‘manage’ competition to achieve some theoretical ideal. **If it has decided that the product does not have the characteristics of natural monopoly, an adequate policy would be to take steps to ensure that a number of competitors can enter the market, each with reasonable prospect of being profitable. The market itself will sort out which of them survive.**”*
- **Therefore, the imputation test should take into account the economies of scale of a new entrant if the NRA wants to promote new entrants in the market.** This is also what the ERG states in its “Report on the Discussion on the application of margin squeeze tests to bundles, March 2009”:
 - *“In a regulatory context, this reasoning may have merit where promotion of competition is the main regulatory principle. Specifically, **regulators might find it justified to promote the entry of relatively inefficient operators in the short term in the expectation that they will become more efficient in the long run.** Additionally, there might be efficiency benefits from having competitors in the market that although they might be less efficient may still be able to constrain the pricing of the SMP operator”.*

A

ERG recommends the use of static test in a stable market



- The ERG covers other issues in a Report on the Discussion on the application of margin squeeze tests to bundles*
- **A static test is adequate in a stable market**
 - *“70. The static test consists of taking as a basis for analysis one period- generally an accounting year but can be as short as one month. Then, data is collected and revenues and costs compared for this period. This test is adequate when current costs and revenues are a good forecast of future margins. This is more likely to happen in stable markets.”*

* ERG document 09_07



ERG recommends the use of Average Total Costs (and LRIC in fast growing markets)



- In its “Report on the Discussion on the application of margin squeeze tests to bundles”, March 2009, the ERG explains that **the use of FDC (or ATC) is difficult** because of arbitrary allocation rules of common costs
- However, Avoidable costs cannot be used as they constrain the potential for entry of efficient operators:
 - *“In the context of an ex ante regulatory tool, they may provide too low a threshold for retail prices, constraining the potential for entry by efficient entrants when the avoidable cost standard does not guarantee the recovery of the fixed costs of entry.”*
 - *“Similarly, pricing at the avoidable cost level could even mean that competitors who provide a competitive constraint could be excluded. This is especially so if there are common or joint costs between different downstream services.*
- **Therefore, ATC are recommended by the ERG:**
 - ***“Accordingly, the use of fully allocated costs as a proxy for average total cost has also been put forward as an alternative cost measure or the allocation of common costs to the LRIC calculation using a reasonable mark-up.”***
- **Also, the ERG recommends the use of LRIC only when markets are growing fast:**
 - ***“A useful distinction between mature and fast-growing markets was raised in one of the questionnaire responses. In the first case, the use of historical costs or current cost accounting may be able to evaluate the margin, but when markets exhibit strong growth LRIC may be more appropriate.”***



BNetzA Guidelines for a margin squeeze test (notes on margin squeeze on 14 November 2007)



- The BNetzA prefers the cost reference of an **efficient competitor** as an imputation test
 - *This enables to promote competition :*
 - “This is about maintaining competitiveness by means of an adequate margin between the SMP undertaking’s retail customer charges and the alternative network costs providers’ upstream cost”
- The BNetzA indicates that the margin squeeze test should be made on a **individual product basis**
 - *The Agency underlines that the competitor might want not to reproduce the portfolio of the SMP operator*
 - “It cannot be assumed [...] that the regulated company can require competitors to offer particular combined services on the market in order to avoid margin squeeze”
- The BNetzA also discusses the inclusion of wholesale specific cost
- The BNetzA points out the fact that OAOs’ customer asset life should be lower than the incumbent’s ones



OPTA Guidelines for a margin squeeze test



- On 28 February 2001, OPTA issued Price squeeze guidelines in collaboration with the competition authority of Netherlands
- The OPTA prefers the cost reference of an **efficient competitor**
 - *“28. In calculating the retail increment (this being an increment on top of the network costs enabling efficient providers to realise an acceptable profit) the Commission and the dg-NMawill base themselves on the costs of an efficient alternative provider”*
 - *No justification is provided*

Conclusion on margin squeeze tests in selected margin squeeze tests guidelines



	ERG	BnetzA	OPTA	Best practice
Equally or Reasonably Efficient Operator?	<i>If the NRA wants to promote competition, the test must take into account economies of scale adjustments (REO)</i>	<i>REO is preferred as it ensure competition in the market</i>	<i>REO is preferred</i>	REO is preferred
Static or dynamic model?	<i>A static model is adequate in a stable market</i>			
Product by product or portfolio?		<i>A product-by-product analysis enables not to force the competitor to reproduce the SMP operator's portfolio</i>		
AAC, AVC, LRAIC or ATC costs ?	<i>ATC is adequate in a stable market</i>			

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Belgian case study for Ethernet margin squeeze test (1/3)



- **Context**

- *IBPT (Belgium NRA) has published a decision* on squeeze tests for Ethernet products (Ethernet, Fast Ethernet, Giga Ethernet Leased Lines) as part of a price control obligation*

1 The preferred cost reference is the one of a **Reasonably Efficient Operator** :

- *“The test should be conduct in the case of a fictive alternative operator that has deployed a network [...]”*
- *No justification is provided*

2 The IBPT uses a **static model** :

- *The test is conduct for a 1-year and a 5-year contract*
- *No justification is provided*

* LE TEST DE CISEAUX TARIFAIRES DES LIGNES LOUEES ETHERNET, april 2009

Belgian case study for Ethernet margin squeeze test (2/3)



3

The margin squeeze test is conducted on a **portfolio basis**

- *“The margin squeeze test between wholesale and retail market will be conducted on a representative leased lines basket basis”*
- *“The basket consists of all Ethernet, fast Ethernet or Giga Ethernet retail leased lines commercialized by Belgacom. Belgacom has provided a list of these lines to the authority”*
- *No justification is provided*

4

The definition of the scope is not relevant in a leased line concept

5

The cost allocation methodology was not defined in the decision

* LE TEST DE CISEAUX TARIFAIRES DES LIGNES LOUEES ETHERNET, avril 2009

Belgian case study for Ethernet margin squeeze test (3/3)



	Test specifications	Justification
1	Reasonably Efficient Operator	<i>No justification</i>
2	Static model	<i>No justification</i>
3	Portfolio	<i>No justification</i>
4	NA	
5	NA	

UK case study for Bitstream access margin squeeze test (1/3)



- **Context**

- *In its direction Setting the Margin between IPStream and ATM interconnection Prices, Ofcom sets obligation on the margin between two Bitstream products*

1

The chosen cost reference is the one of a **Similarly Efficient Operator** :


- *A SEO test enables to promote competition*
 - “2.32 Ofcom takes the view that entrants are likely to benefit less from economies of scope than BT and considers it reasonable to take this into account when setting the margin, given the objective of promoting competition. “
- *There is no reference to Reasonable Efficient Operator*

1

The Ofcom uses a **dynamic model** :

- *A dynamic model enables to take into account the fact that this is a changing market*
 - “2.17 However, in this case the services involved are relatively new; costs and utilisation may be changing rapidly; and there is also a lack of an established time series of financial data. On this basis, Ofcom considers that there are benefits from adopting a forward looking approach which analyses economic costs and revenues over time rather than relying on an historical approach which looks at accounting measures of costs and revenues over a limited number of time periods in which the costs and utilisation may not be representative.
- *According to Ofcom, a DCF model simulates the decision taking process of an operator :*
 - “2.19 Ofcom believes that in this situation a DCF approach is the most appropriate in that it is a standard financial appraisal tool that is particularly suited for analysing capital investment projects where the returns are realised over a number of time periods.”

UK case study for Bitstream access margin squeeze test (2/3)

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- 3 The margin squeeze test is conducted on an **individual product basis**
 - *This enables to promote competition*
 - “2.43 [...] **Ensuring that there is no margin squeeze on any individual product level should avoid an entrant having to replicate BT’s product mix in order to be viable.** Conducting the margin squeeze at the level of the individual product would also prevent BT from targeting particular competitors.”
 - 4 The definition of the scope is not relevant in this case
 - 5 The chosen cost allocation method is **Average Total Costs** :
 - *The use of ATC (CCA FAC) is chosen for practical reasons :*
 - “2.35 The information provided by BT to Ofcom for the purposes of setting the margin is on a CCA FAC basis. Taking into account the fact that the CCA FAC measure provides a long-term measure of costs and common cost recovery and additionally for reasons of practicality set out above, Ofcom has chosen to use CCA FAC as the appropriate cost standard in conducting the margin squeeze analysis.”

UK case study for Bitstream access margin squeeze test (3/3)



	Test specifications	Justification
1	Similarly Efficient Operator	<i>Enables to promote competition</i>
2	Dynamic model	<i>Changing market and close to a decision taking process</i>
3	Individual product	<i>Ability not to reproduce BT's portfolio</i>
4	<i>Not relevant</i>	
5	ATC	<i>Format of data given to Ofcom and practical reasons</i>

Irish case study for Bundles margin squeeze test (1/4)



- **Context**

- *According to ComReg Decision D07/611, eircom has an obligation not to unreasonably bundle retail fixed narrowband access.*
- *In order to assess the “unreasonable” specificity of a bundle, ComReg issued the consultation 10/01 proposing the methodology of a Net Revenue Test which is similar to a margin squeeze test*

- **The preferred cost reference is the one of a **Equally Efficient Operator** :**


- *This choice is justified by the fact that a REO test could facilitate inefficient entry in the market*
 - “in adopting a REO test consideration needs to be made as to whether, given the current state of competition and the regulatory objectives, that the ex-ante imputation test threshold is not set too low as this may promote inefficient entry and could deny the consumers benefits of bundling.”*

- **ComReg seems to use a **static model****


- *The issue to use either a static model or a dynamic model is not addressed in the consultation*

*Document 10/01, part 2.19 & part 3.2.4

Irish case study for Bundles margin squeeze test (2/4)

- 
- The margin squeeze test is proposed to be conducted in a **individual product bases**
 - *A portfolio analysis would lead to a lack of flexibilities for OAOs*
 - “ComReg believes that applying the obligation only to bundles as a whole would make Eircom’s own range of bundles, and its pricing across bundles, a reference point, from which it would be difficult for competitors to deviate. ”
 - ComReg chose a **extended scope** of costs and revenues as it includes calls

Irish case study for Bundles margin squeeze test (3/4)

- 
- The preferred cost allocation method is **Average Total Costs**
 - *Neither AAC nor AVC gives the good signal :*
 - “ComReg is of the preliminary view that AVC would not be an appropriate measure of cost to be applied as it is too low a cost threshold for use in the net revenue test or any other ex-ante imputation test given the competitive conditions of the market for retail fixed narrowband access.”*
 - “ComReg is of the preliminary view that to apply an AAC cost rule to an ex-ante context could therefore lead to sub-optimal entry conditions with little entry occurring. This would be to the detriment of competition and, in turn, consumers.”*
 - *The use of ATC or LRAIC is recommended by the European Commission in its Guidance on the Art. 82*
 - “Long-run average incremental cost is the average of all the (variable and fixed) costs that a company incurs to produce a particular product. LRAIC and average total cost (ATC) are good proxies for each other, and are the same in the case of single product undertakings. If multi-product undertakings have economies of scope, LRAIC would be below ATC for each individual product, as true common costs are not taken into account in LRAIC. In the case of multiple products, any costs that could have been avoided by not producing a particular product or range are not considered to be common costs. In situations where common costs are significant, they may have to be taken into account when assessing the ability to foreclose equally efficient competitors.”
 - *However, the competition is not developed enough for the use of LRAIC*
 - “ComReg is of the preliminary view that competition is not yet sufficiently developed for the use of LRAIC”*
 - *The ATC can be modified because the Subscriber Acquisition Costs (SAC) per customer can change according to economies of scale. Therefore, the cost of SAC is more important for a small operator than for a larger operator*
 - “ComReg believes that SACs could increase as it takes increasingly more resources and cost to persuade new customers to join and/or switch from other operators.”*

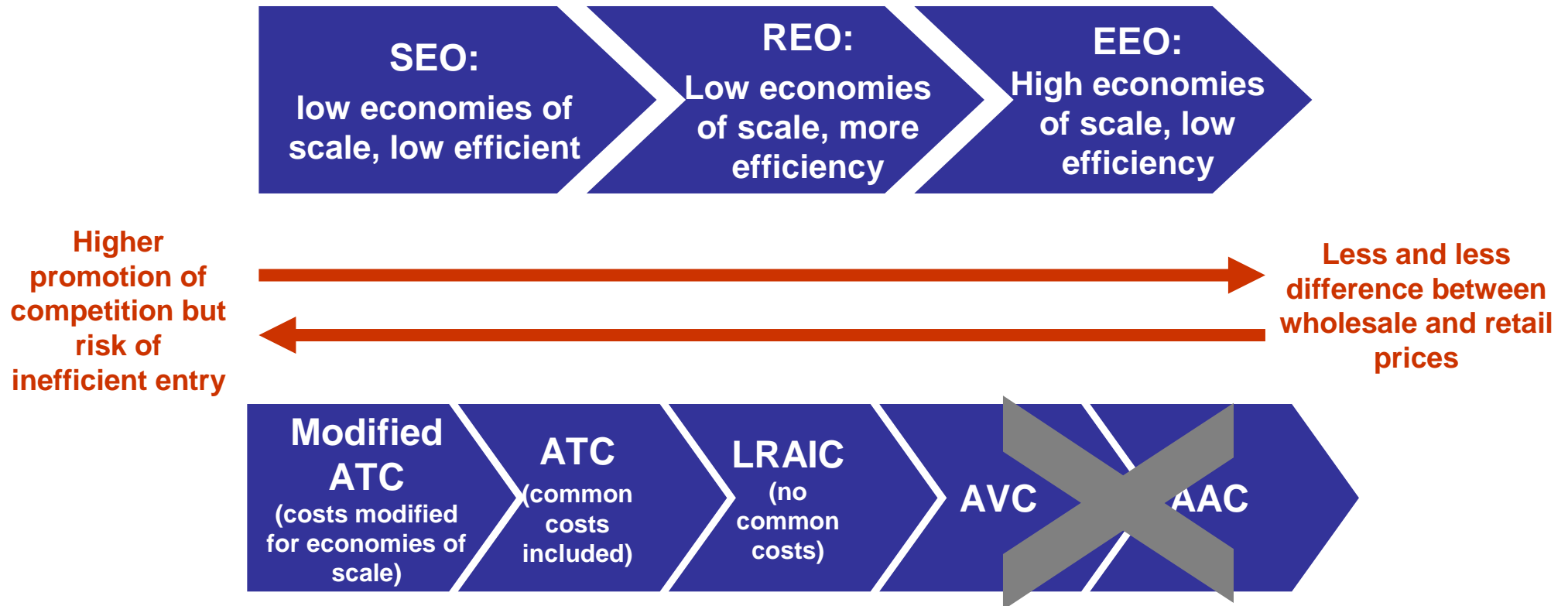
Irish case study for Bundles margin squeeze test (4/4)



	Test specifications	Justification
1	Equally Efficient Operator	<i>The risk of REO is to facilitate inefficient entry in the market</i>
2	Static model	<i>No justification</i>
3	Individual product	<i>The OAOs have the benefit of more flexibility</i>
4	Extended costs & revenues scope	<i>No justification</i>
5	ATC/modified ATC	<i>The competition is not developed enough to use “partial costs” (LRAIC, AVC or AAC)</i>

*Document 05/88, part 3.2.9, appendix C

Conclusion on margin squeeze tests in selected in selected EU Countries: **margin squeeze tests are to be defined on a case by case basis (2/2)**



Conclusion on margin squeeze tests in selected in selected EU Countries: **margin squeeze tests are to be defined on a case by case basis (1/2)**



	Belgium (Ethernet Leased Lines)	Ofcom (Bitstream)	ComReg (Bundles)
1	Reasonably Efficient Operator	Similarly Efficient Operator	Equally Efficient Operator
2	Static model	Dynamic model	Static model
3	Portfolio	Individual product	Individual product
4	NA	<i>Not relevant</i>	Extended costs & revenues scope
5	NA	ATC	ATC/modified ATC



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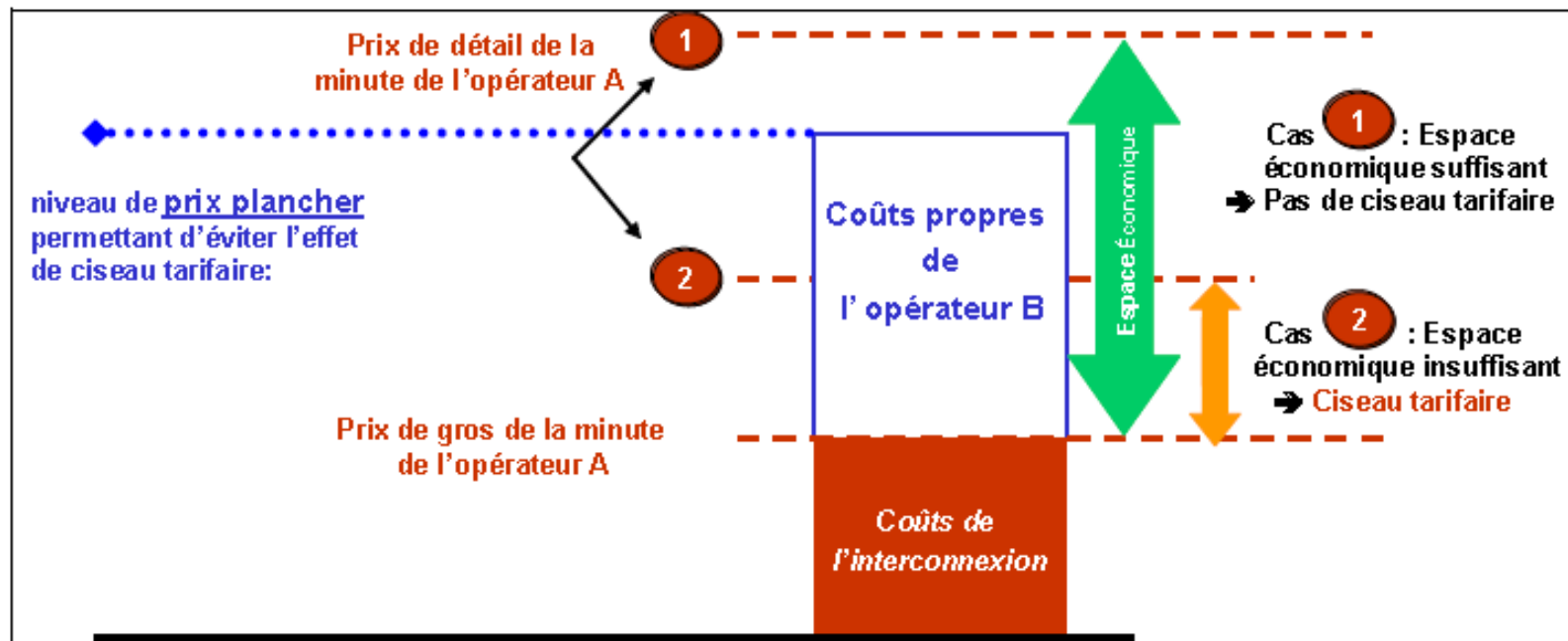
3.1. Algeria in the context of retail tariff regulation

3.2. Senegal in the context of wholesale tariff regulation

The margin squeeze test has been performed in 2007 in the context of regulating Mobile Retail Rates (Décision N°14 du 22 avril 2007)



Figure 12 : Principe du test de ciseau tarifaire



Source : Tarification des télécommunications pour le grand public et action du régulateur, Journées d'études du 18-19 décembre 2004, Éliès Chitour, Service de la régulation fixe et mobile, ARCEP

In the context of a 3rd mobile operator being evicted by the dominant operator, the ARPT has performed a static squeeze test on individual products such as “Allo 3=3” ...



25. Dans le cas d'espèce, l'offre Allo « 3 = 3 » de OTA est répliquable par un opérateur concurrent ayant une part de marché comparable à celle du dernier entrant WTA à partir du moment où cet opérateur est à même de proposer une offre à attractivité au moins égale pour le consommateur sans supporter de pertes sur cette offre (voir figure 13).
- Pour les consommateurs algériens, une offre 3 numéros à tarif préférentiel parmi les seuls clients de WTA constitue une proposition de bien moindre valeur qu'une offre 3 numéros on-net à tarif préférentiel vers les clients de OTA (effet de club).
 - Pour répliquer l'offre Allo « 3 = 3 », WTA ne peut donc réagir qu'en élargissant la générosité proposée sur les 3 numéros aux clients de tous les opérateurs mobiles algériens et pas seulement aux clients WTA.
 - Hors impact du trafic international et SMS, l'espace économique disponible pour WTA est estimé par l'ARPT à 341 DA par mois par client.

		Trafic en % du trafic sortant	Prix unitaire moyen HT	Coût unitaire HT
On-net	3 N°	x%	x	x
	autres	x%	x	x
Off-net	3 N°	x%	x	x
	autres	x%	x	x
Vers fixe		x%	x	x
International		x%		
Entrant	National	x%	x	x
	international	x%		
Moyenne pondérée par le trafic			x	x
Revenus/Coûts mensuels (MoU : 80 minutes)			x	x
Espace économique				341

... a reasonably efficient operator test based on the ATC of an efficient later entrant of the size of the 3rd mobile operator (REO)



Figure 14 : Estimation des coûts propres pour un opérateur efficace de la taille de WTA pour la réplication de l'offre de OTA Allo « 3=3 »

Coûts réseaux	Extrapolation du CMILT 2005 Nedjma	X
Coût d'acquisition		
Recharges	X% du CA	X
Communications	X% du CA	X
Autres (Licence...)		
Personnel	X%	X
CRM & Billing	X%	X
Frais généraux	X%	X
Licence	X	X
Contribution SY	X% du CA	X
TOTAL		420

Source: Analyses ARPT

- Le test d'absence de ciseau tarifaire pour l'offre OTA Allo avec 3 numéros préférés est satisfait dès lors que le prix de la minute pour les 3 numéros préférés est supérieur ou égal à 9,7 DA TTC / min.



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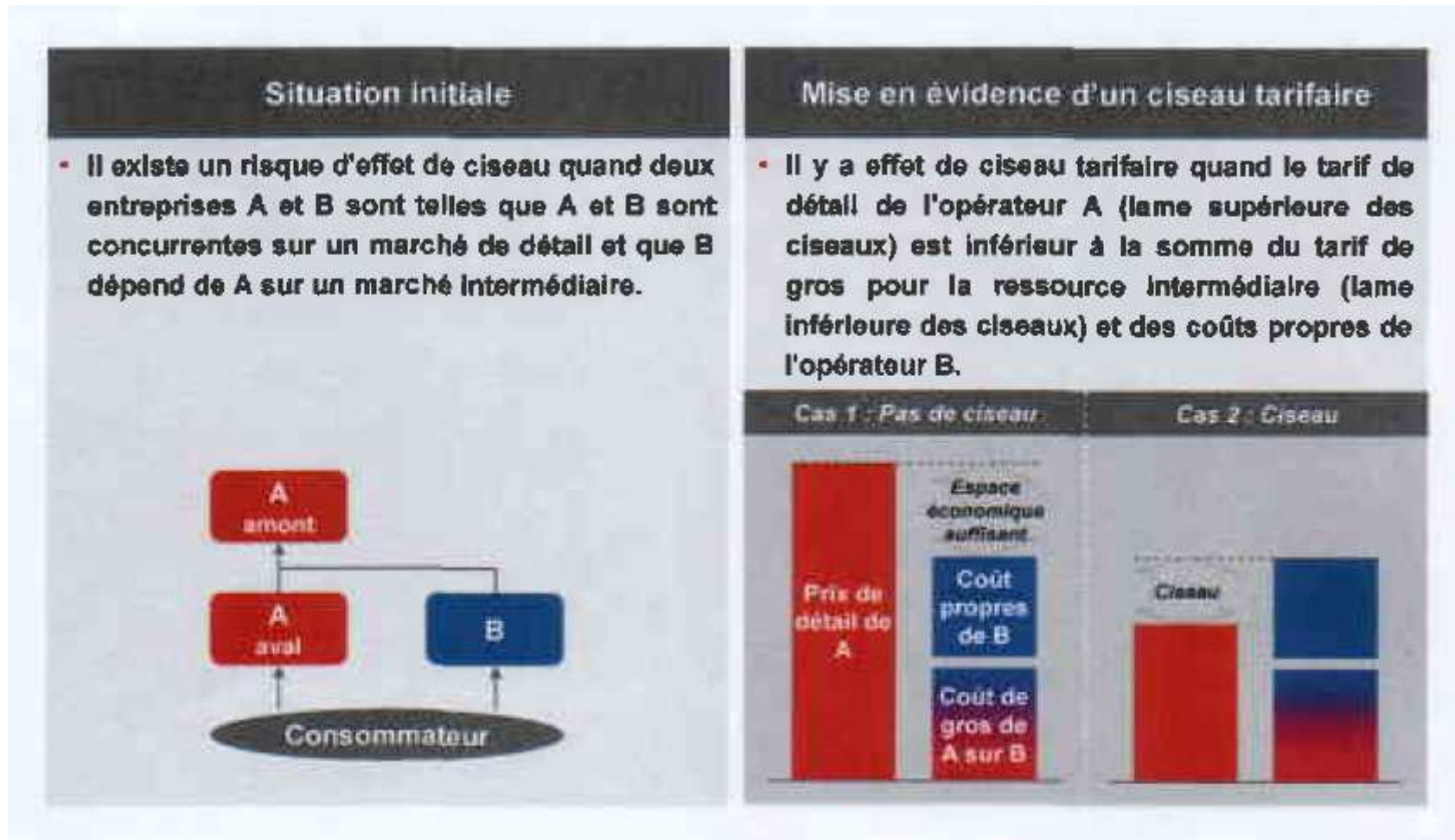
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The margin squeeze test has been performed in 2009 in the context of regulating Mobile Termination Rates (Décision N°2009- 00014 du 31 juillet 2009)



In the first year of activity of the 3rd mobile operator, the ARTP has performed a static squeeze test on the individual product off net calls using ...



L'ARTP rappelle qu'elle avait souligné dans sa décision n°010062/ARTP/DG/SG/DO du 30 octobre 2008 portant approbation du catalogue d'interconnexion de SONATEL pour la période du 1^{er} juillet 2008 au 30 juin 2009 qu' « elle est également sensible au fait que, parmi les pays du Maghreb et de la sous-région, le Sénégal présente un des différentiels les plus faibles entre tarif de détail et tarif d'interconnexion. Cette spécificité rend d'autant plus nécessaire le respect du principe de l'orientation vers les coûts afin de permettre une concurrence saine et loyale entre les opérateurs mobiles en place et l'opérateur dernier entrant.»

Il apparaît que l'espace économique (défini comme la différence du prix de détail HT pratiqué par l'opérateur départ pour un appel off-net et le tarif HT de l'interconnexion commutée mobile sur le réseau arrivé) en 2009 est comparable à celui en Algérie en Tunisie mais très inférieur à celui du Maroc comme à celui de la sous-région.

Or, si l'espace économique est insuffisant, les opérateurs concernés subissent un ciseau tarifaire, le tarif de détail (lame supérieure des ciseaux) étant alors inférieur à la somme du tarif de gros pour la ressource intermédiaire (lame inférieure des ciseaux) et des coûts propres de l'opérateur. En présence de ciseau tarifaire, les conditions de concurrence des réseaux et services de télécommunications ne sont plus garanties.

... a REO test based on proxies of ATC benchmarked with Maghreb countries...



L'espace économique peut être comparé à deux indicateurs : d'une part, le montant du tarif de l'opérateur pour l'interconnexion commutée mobile et, d'autre part, le tarif pour un appel on-net divisé par 2. Au Sénégal, l'espace économique est très inférieur à ces deux indicateurs, à la différence des pays du Maghreb et des autres pays de la sous-région, ce qui conduit à une suspicion *a priori* d'existence de pratique de ciseau tarifaire au Sénégal.

