

Appendix II: Decisions on Recommendations from the Public Consultation on the *Determination: Domestic Retail Fixed Telephony and Fixed Broadband Market Definitions*

The following summarises the comments and recommendations received from the public consultation, held from 6th September to 31st October 2023, on the *Determination: Domestic Retail Fixed Telephony and Fixed Broadband Market Definitions* (the Determination), and the decisions made by the Telecommunications Authority of Trinidad and Tobago (the Authority).

The Authority wishes to express its appreciation to the following stakeholders for responding to the consultation:

1. Digicel (Trinidad & Tobago) Limited
2. Flow (Columbus Communications Trinidad Limited)
3. TSTT (Telecommunications Services of Trinidad and Tobago Limited)

Item	Section	Section Title	Stakeholder	Comments	Recommendations	TATT's Decision
1	1	Introduction	CCTL	<p>The views expressed herein are not exhaustive. Failure to address any issue in this response does not in any way indicate acceptance, agreement or relinquishing of Columbus Communications Trinidad Limited's (CCTL's) rights. The telecommunications market space is one that is characterized by constant change and innovation. The advancement in technology and how services are delivered continue to impact the markets and consumers experiences. Telecommunication services have further solidified their importance to the development and progress of national economies, especially with the rapid push towards advancing the digitization agenda. The Covid-19 pandemic upended the normal way of life of people and therefore new solutions had to be found to address the day-to-day problems and challenges of life. Information and communications technology has risen to the forefront of this new reality. As technology undergo changes to meet the increasing needs of society, the market structure changes are a corollary outcome. To this end, the regulations, if any, that sit on these market structures must be fit for purpose and so designed to advance and not</p>	<p>Considering the significant market changes since the 2009 market assessment exercise, CCTL recommends that a forward-looking approach should be taken in this exercise to define the markets.</p>	<p>The Authority thanks CCTL for its recommendation that a forward-looking approach in this market definition exercise should be adopted. The Authority acknowledges that there have been considerable developments within the telecommunications landscape due to technological changes, COVID 19 and the essential functions of information and communications technologies (ICTs). These developments, among others, are critical elements of the rationale upon which the Determination was premised. The Determination takes into account relevant and forward-looking developments in ICTs affecting fixed telephony and fixed broadband markets, some of which CCTL refers to. Further clarification is provided on the treatment in the Determination of these new developments (which include, inter alia, the launch of fibre-based services, multi-play bundles, acquisitions, and over-the-top (OTT)-based communication services) that were not elaborated on in the 2009 <i>Determination of Market Definitions on the Fixed Telephony Markets of Trinidad and Tobago</i>. The Authority took into account past, present and future considerations, to ensure an unbiased, multi-dimensional and comprehensive review of the evolving fixed telephony and broadband market definitions. Thus, the Determination reviewed historical market data, customer market survey, qualitative and quantitative operator data templates and surveys, international benchmarks, qualitative analyses, and trend analyses (where applicable) of technologies or product characteristics, customer usage patterns, relative prices and</p>

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				<p>retard or constrain the development of the telecommunication industry.</p> <p>Defining fixed telephony and broadband markets and/or submarkets is vital for assessing whether ex ante regulations could be deemed necessary and appropriate to constrain and restrict the abuse of any form of significant market power identified. As the Authority rightly notes, there have been the launch of fibre-based services and multi-play bundles, acquisitions, and OTT based communication services that would have significantly changed market structures, since the last market definitions done in 2009. The internet is now a very big player in the telecommunications markets, accounting for almost 45% of total industry revenues. At this point it is industry leader by service type, surpassing voice. The trend is very clear as subscriptions to fixed and mobile internet services all increased over the period under consideration, while subscriptions to fixed voice and cable TV decreased. Fixed voice, in its traditional sense, is a declining service. Increasingly the service is no longer being run over a separate copper network but over broadband/IP technology, as part of a</p>		<p>tariffs, and customer switching evidence. Operators are advised that the review of present data is equally essential and required to conduct assessment(s) of dominance of the relevant market. Assessment of dominance are premised upon the degree of market power held by current participants based on the market structure that presently obtains, and not the future market structure. As such, a disproportionately forward-looking assessment (or unbalanced review) of the relevant market, may have limited or no application to the present realities and regulation of the domestic retail fixed telephony and broadband markets distortions (or failures), including anti-competitive behaviour, acts of unfair competition, dominance and abuse of dominance, which, are occurrences based on the present state and not future states.</p> <p>The Authority acknowledges CCTL's statement that 'defining fixed telephony and broadband markets and/or submarkets is vital for assessing whether ex ante regulations could be deemed necessary and appropriate to constrain and restrict the abuse of any form of significant market power identified'. The Authority also agrees with this statement thus justifying the need for this exercise of defining the market boundaries prior to any ex ante regulations on abuse of significant market power.</p> <p>The Authority further acknowledges the upward trend in fixed Internet service penetration, which increased by 4.2% in 2022</p>

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				<p>multi-service layered technology. This is a game changer. Therefore, not only should we look at historical trends, but all efforts must be made to look into the foreseeable future in as reasonable manner as can be done. Based on observed trend the voice market is faced with sufficient market restraint and forces to keep prices well within check. Additionally, even in very small (niche) market definitions there can be little to no exercise of market power.</p> <p>A forward-looking viewpoint must be taken into consideration when conducting this analysis.</p>		<p>year on year, and the marginal reduction in fixed voice service penetration, which declined -1.7% in 2022 (year on year). The Authority also notes that the penetration rate of multi-play bundles, which include fixed voice and/or fixed broadband subscriptions, increased steadily over the three-to-five year period reviewed, according to the data submitted by operators, as captured in section 3.4.1.3 of the Determination.</p> <p>The revised Determination uses evidence of prevailing and future trends in arriving at its conclusion of three separate markets, namely, (1) a market for standalone fixed telephony services (fixed line rental and fixed calls), and mobile voice services; (2) a market for standalone fixed broadband services; and (3) a market for multi-play bundles (2P/3P/4P+) which include fixed telephony and/or fixed broadband services.</p> <p>The Determination takes into account the growing adoption of OTT usage domestically. This trend is noted to impact the stability of the market boundary identified and, as such, the Authority has proposed to undertake more frequent assessments of the relevant market in the fixed telecommunications industry.</p> <p>Complementing its forward-looking approach, the Authority goes further to indicate that there is some degree of substitution between OTT and fixed voice services (at the usage level) and that the demand for OTT services by consumers in Trinidad and Tobago is likely to increase in the future. Therefore, the market</p>

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						<p>power currently held by providers of fixed voice services may be only partially constrained by OTT services (see section 4.3.1.4. Switching Behaviour).</p> <p>However, at this time, it has been observed that the number of persons willing to substitute from fixed voice to OTT voice and/or messaging services in the event of a Small Significant Non-Transitory Increase in Price (SSNIP) is low and represents a minority of the customer population. Based on the evidence presented, OTTs remain partially substitutable with fixed voice services and do not entirely fall within the fixed voice market, at this time, as only a small volume of customers would switch from fixed voice to OTT services on a call basis, in the event of a SSNIP. A stronger and significant demand response would be required for a SSNIP on fixed and mobile voice services to be unprofitable and for OTTs to form part of the relevant product market.</p> <p>Furthermore, the Determination also captures and facilitates the future protection of multi-play consumers in its identification of multiservice bundle consumers as a distinct relevant market. Multiservice bundles (2P/34/4P+) are noted to have a lower churn rate, greater spend on telecommunications services particularly during volatile periods, and access to a wider range of telecommunications services (Lukasz Grzybowski 2022), (Greenstein 2011).</p>

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						<p>These market boundaries therefore allow the Authority, through ex ante and ex post regulation, to more efficiently protect consumers from discriminatory tariff setting, consumer welfare encroachment, and other unfair market conduct, which tend to affect tied consumer groups. These market boundaries allow the Authority to review the actions or conduct of operators with market power in the relevant markets in an expedited manner and thus can be considered forward looking in its approach.</p> <p>Standalone fixed telephony service often represents the reliable and basic tier of telecommunications service and is often utilized by vulnerable or legacy consumer groups. The Determination, by evaluating fixed voice access and call services as the focal service, averts leaving this segment of ICT consumers behind, and is therefore aligned with a forward-looking, ubiquitous and universal access agenda. The evaluation of standalone fixed voice services also facilitates the review of anti-competitive conduct (namely, the abuse of dominance) targeted toward traditional fixed voice consumers, where applicable. In its conclusion, the revised Determination states that standalone fixed telephony services (fixed telephony services line rental and fixed calls) and mobile voice services form a single market, given on account of significant demand-side substitution including customer switching, on a call basis, from fixed and mobile voice services domestically, and anticipating future</p>

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						<p>trends in product features and customer usage patterns. This market definition is forward-looking given that fixed voice customers are not completely giving up their fixed voice subscription at this time. The definition is premised on significant partial demand substitution, among other and present and expected future trends and, hence, is forward-looking in its conclusion on mobile services.</p> <p>The Determination, in its identification of both standalone fixed broadband services and multi-play bundles (2P/3P/4P+), which include fixed telephony and/or fixed broadband services as distinct markets, captures the fastest growing telecommunications customer groups and facilitates efficient future ex ante and ex post regulatory intervention. Figure 6 in the Determination reveals that, between March 2017 and March 2021, growth in the uptake of broadband services was relatively stable, with standalone broadband connections increasing annually at the rates of 0.39%; fixed voice and multi-play bundled subscriptions that include fixed voice, increased by 2.76%, and bundled subscriptions that include fixed broadband services increased by 2.19% over the same period. Therefore, the Determination, by its evaluation of multi-play bundled subscriptions, standalone fixed and mobile voice, and standalone broadband and its conclusions of distinct markets for these services⁴ is robust in evaluating not only forward-looking trends,</p>

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						<p>but in considering legacy consumers and the present appetite of datacentric consumers.</p> <p>Regarding its assessment on whether mobile services could be considered an effective substitute for fixed voice services, the Authority has revised its position in the Determination and has included mobile voice services as a part of the relevant domestic retail fixed voice market definition. This change was made considering the significant partial substitution observed (i.e., the reduction in consumption of fixed voice services and the related increase in the consumption of mobile voice service on a calls basis, as an alternative), which may constrain a hypothetical monopolist (HM) from profitably increasing the price of fixed voice and messaging services. This revision takes into consideration feedback received from stakeholders during consultation, additional operator metrics (including, significant customer switching on a calls or usage basis, constant service tariffs and declining financial earnings) and international best practices. Specifically, the Authority notes the revised European Commission Notice on the definition of the relevant market for the purposes of EU competition law, which permits taking into account usage metrics (partial substitution) and does not require the exclusive use of perfect substitution (access metrics) for market definitions.</p>

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						Notwithstanding this, the Authority reserves the right to amend the definitions as changes develop in the market, pursuant to relevant evidence, within its legal remit.
2	1	1. Introduction In the Fixed Market Definition 2009 and subsequent dominance assessment, the Authority concluded that Telecommunications Services of Trinidad and Tobago (TSTT) was	Digicel	Digicel (Trinidad & Tobago) Limited ("Digicel") understands the purpose of the current consultation and Draft Determination: Domestic Retail Fixed Telephony and Fixed Broadband Market Definitions ("Draft Determination") is to review and assess the definition of the relevant markets as contained in the 2009 Determination of Market Definitions in the Retail Domestic Fixed Voice Sector of T&T (the "Fixed Market Definition 2009"). Once the current consultation is completed, the Telecommunications Authority of Trinidad and Tobago ("Authority") will then finalise the Draft Determination so that it may then proceed to review the Authority's related Determination: Dominance in Retail Domestic Fixed Telephony Markets that was made in March 2010 ("Dominance Determination 2010"). Digicel further understands that review of the Dominance Determination 2010 will be the	Digicel respectfully submits that the full consultation process be confirmed so that interested parties have additional certainty over proposed consultation timelines and confirmation of how the Draft Determination is intended to be used.	The Authority thanks Digicel for its recommendations on this consultation process and notes the request for the confirmation of the full consultation process. The Authority provides further clarity on the consultation process as follows: The Authority's will publish its consultation schedule on its website with the dates for the second (i.e., last) consultation on this Determination. This consultation schedule can be accessed at https://tatt.org.tt/consultations/schedule-of-documents-for-consultation/ . In the next phase of this project, the Authority will prepare a determination of dominance document, followed by an abuse of dominance document, if applicable, which will conclude the assessments of this market. Additionally, in response to Digicel's comment on a separate consultation process on the Determination: Dominance in Retail Domestic Fixed Telephony Markets 2010, the Authority advises that the document will be replaced by the dominance

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		<p>a dominant operator in the retail fixed narrowband markets for access and fixed calls in Trinidad and Tobago. This 2023 market definition exercise (and the subsequent competition assessment) seeks to update that determination by conducting a new ex ante review of the</p>		<p>subject of a separate consultation process that will be conducted once the current consultation has been completed and a final determination has been made.</p> <p>Digicel agrees that a review of the Fixed Market Definition 2009 is an important pre-requisite for any review of the Dominance Determination 2010.</p> <p>This is particularly the case given the time that has elapsed since the Authority's previous Determination and the changes that continue to occur in markets, technologies and services.</p>		<p>determination to be prepared in 2024. Accordingly, this Determination will be applied, in accordance with all relevant legislation and regulatory frameworks including the Telecommunications Act, Chap 47:31 (the Act) and the Concession agreements among others, as deemed necessary by the Authority.</p> <p>Digicel is also asked to take into consideration the application and use of determinations of market definition and of dominance. The determination of the market definition can be used for a range of ex ante and ex post assessments. It should be noted that a market must be defined for a regulatory authority to find a concessionaire dominant and impose any ex ante regulation as a result. Additionally, determinations of market definition used in ex ante assessments may also provide an effective starting point for any ex post intervention (for example, for merger assessments and investigations into alleged anti-competitive conduct).</p> <p>Pursuant to sections 29 (8) and (9) of the Act, market definition assessment is an essential factor to be taken into account when establishing a determination of dominance or the declassification of said dominance. Accordingly, the Authority is obliged to utilise this Determination in determining dominance in the fixed telephony and fixed broadband markets.</p>

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		domestic retail fixed telephony and fixed broadband services.				
3	1	1. Introduction In addition to facilitating the introduction of ex ante price regulation, where appropriate, and serving as a potential starting point for the market definition	Digicel	<p>Digicel agrees that the markets determined by the Authority as a result of this proceeding will be a useful starting point and will inform any future ex post investigations that may be undertaken.</p> <p>However, it is important to note that the current assessments should not be considered to be determinative in the context of any future ex post investigation and that further assessments will need to be undertaken before any future determination can be made.</p>	Digicel recommends that a clarifying statement be included to confirm that the Draft Determination (once finalised) will be reviewed in the context of any future ex post investigation.	<p>The Authority thanks Digicel for its comments. Digicel is advised that the Determination, once final, will replace the 2010 Determination, and its results will be taken into account when assessing dominance in the domestic retail fixed telephony and fixed broadband markets.</p> <p>Additionally, noting changes in technology and other advancements, the Authority will undertake a review of the fixed market definitions within a three-to-five-year period, to ensure that local nuances of the market are adequately measured and evaluated. Specifically, the Determination states that “given the dynamism of communication services, shifts in consumption patterns in the post-pandemic era and evolving trends in OTT applications, the Authority considers that the fixed voice market definition should be reviewed in the subsequent three to five years”.</p> <p>The Authority is aware of the costs and resources required to undertake a market definition exercise. Accordingly, where the market definition exercise can be reasonably and credibly</p>

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		<p>used for the purpose of other any ex post investigations, any markets that are defined will also provide the Authority with a reference point for monitoring competitive dynamics in retail markets. For example, during any regular monitoring of market dynamics and early</p>				<p>applied to any ex post investigation (for example, merger assessments and investigations into alleged anti-competitive conduct), the Authority will use the results, to avoid inefficient use of resources.</p> <p>The Authority will continue to engage in the credible use of all its market studies, analysis and determinations, in accordance with international best practices, domestic market data and evidence and the Authority's legal remit.</p>

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		identification of potential issues with the functioning of the market, once the market has been defined.				
4	1	General	TSTT	Telecommunications Services of Trinidad and Tobago Limited ("TSTT") appreciates that the Telecommunications Authority of Trinidad and Tobago ("TATT") has given operators the opportunity to comment on these matters. It should be noted that TSTT's comments on this document do not preclude TSTT from making further comments in the future.		The Authority thanks TSTT for its participation in this consultation and welcomes all future comments within the consultation process on the Determination.
5	1.1	Background to the Authority's Determination	CCTL	In the Fixed Market Definition of 2009, the Authority defined relevant markets for the domestic retail fixed telephony services for ex ante regulation on a technology neutral basis. It is instructive that 14 years have elapsed since the	In light of the new and evolving market realities we recommend that the market assessment	The Authority analysed a range of both qualitative and quantitative information, including the SSNIP hypothetical monopolist test (HMT), which is considered standard practice in market definition determination (ITU World Bank 2020). However, the Authority also considered other qualitative and

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				<p>last market definition assessment was done. Since then, we have observed many changes in technology and consumer behavior patterns. Voice, once king in the telecommunications space, is now playing runner up to data. Consumers prefer to be connected, always on, throughout the day as opposed to having sessions. Consumers prefer to be connected always, which is what broadband now provides. With contiguous /ubiquitous deployment and availability of broadband and Wi-Fi networks, both public and private, consumers are able to move in-between these mesh networks in a seamless manner, thus achieving the objective of staying connected throughout the day. The implication for this is far-reaching. It means consumers have access to voice services always, and sometimes free, from both fixed location and also mobile. To match and compete with unlimited access to VoIP minutes, fixed voice service providers have resorted to offering packages providing unlimited voice minutes. The seamless and ubiquitous nature of broadband and Wi-fi networks is a significant game changer in the telecommunications space,</p>	<p>analysis incorporate approaches in addition to the SSINP test to define market boundaries.</p>	<p>quantitative factors when defining the relevant fixed telephony and broadband market boundaries, including product characteristics, uptake and usage trends, relative prices and supply-side substitution. The Authority's data sources included qualitative responses from concessionaires on issues such as market outlooks, consumer preferences or behaviour, and comparability of products. The Authority also utilised local market data derived from the TATT-KCL Fixed Customer Survey. Quantitative data was also requested from operators to conduct the analysis of the market boundary.</p> <p>Moreover, in applying the SSNIP, the Authority utilised approved adjustments for two-sided platforms¹, including absolute values, in place of percentages. As an example, the TATT-KCL Fixed Customer Survey SSNIP test used increments of, inter alia, TT\$3.00, TT\$3.00—TT\$5.00, and TT\$5.00—TT\$10.00 in discerning customer responses to a SSNIP. Furthermore the SSNIP test was initiated from a focal product with a positive price and not vice versa using the zero-rated service. These modifications enhance the credibility and integrity of the survey when administered (ITU World Bank 2020). For example, the TATT-KCL Fixed Customer Survey estimated the SSNIP on the focal product based on customer</p>

¹ Two-sided platforms occurs where a firm sells two different products or services to two distinct groups of consumers, while recognising that the demand from one group of customers depends on the demand from the other and, in some instances, vice versa (OECD , 2018)

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				<p>thus changing a lot in the market dynamics and construct of market boundaries. This development and its continued evolution must be afforded appropriate and material consideration in this exercise. The qualitative data along with quantitative data supporting any market assessment must be viewed from a trend perspective, even with a structural break viewpoint, given the Covid-19 pandemic, which would have seen an acceleration in technological development in the space and consumers ensuing change in behavior where the internet, and access to it, has commanded a larger role in executing daily lifestyles and challenges.</p>		<p>monthly spend ranging from under TT\$50.00 to above TT\$600.00.</p> <p>The Authority also notes CCTL's discussion on the degree of functional substitutability, availability and usage of broadband connectivity and voice services.</p> <p>The Authority acknowledges in the Determination the high uptake of fixed broadband for voice purposes (VoIP and OTTs). Specifically, sections 3.1.1.1 Product Characteristics of the Determination considers that there is a high proportion of survey respondents subscribed to standalone broadband services that mostly use their broadband connection for managed VoIP and OTT calls.</p> <p>The availability of fixed broadband networks and service reached 88% household penetration in 2022 (and 94% in Q4 2023) which is noted in the Determination. The level of substitutability based on similar functions, level of service uptake, level of service use, and decreasing use of fixed voice on a call basis, provide for movement between traditional fixed voice and fixed broadband voice service networks. This movement is also supported in the Determination with effective supply-side substitutability denoted in section 3.3.2, which states that there is supply-side substitution between fixed voice and fixed broadband services in Trinidad and Tobago, irrespective of</p>

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						<p>whether these are sold on a standalone basis or as part of multi-play bundles.</p> <p>Notwithstanding functional and supply-side substitutability, market trends in support of fixed voice and data complementarity (including the growth of multiservice bundles, increasing demand for both voice and broadband subscriptions, and price differentiation), substantiate the results of the TATT-KCL Fixed Customer Survey SSNIP indicator, i.e., that consumers are not entirely foregoing fixed voice service subscriptions but are able to engage in substitution on a call basis.</p> <p>This partial degree of substitution supports that, at this time, only a low volume of customers would switch from fixed voice service in the event of a SSNIP to OTT voice and messaging (6.7%), as suggested in the TATT-KCL Fixed Customer Survey.</p>
6	1.1	Background to the Authority's Determination	Digicel	<p>Digicel is concerned that the consumer survey undertaken by Kaari Consultants Limited ("TATT-KCL Fixed Customer Survey 2022") does not adequately capture the information that is required for the Authority to make a properly informed determination.</p> <p>This is particularly the case in respect of its treatment of access devices that consumers use for</p>	<p>Digicel recommends that:</p> <p>the Authority give further consideration to the substitutability of OTT voice services and undertakes further survey work to understand how</p>	<p>The Authority is appreciative of Digicel's feedback on OTT substitutability.</p> <p>Digicel is reminded that the Determination was informed by a multiplicity of sources and factors, including the fixed customer survey undertaken, operator data market data and international best practices.</p>

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				<p>making calls from fixed services (see response to Document Section 4.3.2 below).</p> <p>Digicel is also concerned that the Authority has not published a copy of the questionnaire that was used as a basis for the TATT-KCL Fixed Customer Survey 2022. As such we have not been afforded a fair opportunity to consider and comment on the approach that was taken or the results that were reported.</p>	<p>consumers make calls via their fixed network connections; and the Authority publishes the questionnaire referred to in Appendix 1 of the TATT-KCL Fixed Customer Survey 2022 in order that interested persons may have a fair opportunity to review it and provide any comments they may have.</p>	<p>In designing and executing the TATT-KCL Fixed Customer Survey, well-established standards set by the United Nations Fundamental Principles of Official Statistics and the Generic Statistical Business Process Model (GSBPM v4.0), were followed. Furthermore, the Authority considers that the questionnaire design of the TATT-KCL Fixed Customer Survey and its execution sufficiently captured the requisite information that provides insights on consumers call demand patterns based on services available to them.</p> <p>In addition to the survey, data templates were issued to operators to obtain supplementary information on their services including OTT usage. Therefore, the TATT-KCL Fixed Customer Survey was not the only evidence used to inform customer demand preferences, service substitutability and the overarching determination.</p> <p>The Authority is aware of the proliferation of OTT services in the domestic market, which is noted in the TATT-KCL Fixed Customer Survey showing adoption rates of OTT services. Specifically, the TATT-KCL Fixed Customer Survey shows approximately 62.9% to 72.6% of the sample population, utilises fixed broadband services for the purpose of making calls over the Internet. This represents a major increase in OTT service adoption and usage. However based on the results of the TATT-</p>

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						<p>KCL Fixed Customer Survey, only a partial degree of substitution exists at this time.</p> <p>Any decision to include a service within the relevant market boundary is informed significantly by consumers sensitivity to a SSNIP, among other non-price and price factors. Therefore, in response to Digicel's query on the substitutability of OTT services with traditional fixed voice services, the operator is advised that (6.7%) indicated that, in the event of a SSNIP, they would make fewer calls using their fixed voice package and increase their consumption of OTT services.</p> <p>It should be noted that the number of persons willing to substitute from fixed voice to OTT voice and/or messaging services in the event of a SSNIP was observed to be low at this time, the demand for OTT services by consumers in Trinidad and Tobago is expected to increase in the future. A stronger and significant demand response would be required for a SSNIP on fixed and mobile voice services to be unprofitable and by extension for OTTs to form part of the relevant product market. The Authority therefore considers that the fixed markets definitions should be reviewed within a three-to-five-year period.</p> <p>Furthermore, Digicel is asked to note the TATT-KCL Fixed Customer Survey questions on the ranking of uses of fixed broadband Internet service. These questions featured in Table 12 are technology neutral and include respondents who access fixed</p>

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						<p>networks, irrespective of the type of devices used to connect, including mobile phones. Therefore, all devices that consumers use for making calls via the fixed network were considered in the Determination and the TATT-KCL Fixed Customer Survey.</p> <p>A copy of the questionnaire has been added to the TATT-KCL Fixed Customer Survey results.</p>
7	2	Approach to Determining Dominance in the Relevant Markets	Digicel	No Comment	No Comment	No comment by Digicel noted.
8	2	Approach to Determining Dominance in the Relevant Markets	TSTT	Globally regulators are increasingly recognising fixed voice as a separate definable market requiring ex-ante regulation. For example, in 2014 (Explanatory Note accompanying the Commission Recommendation on relevant product and service markets within the electronic communications sector susceptible to ex ante	TATT should include in its review of markets a consideration of relevance. Even if TATT manages to convince itself that, for	<p>The Authority is appreciative of TSTT's feedback and provides clarification on the findings of the market and relevant factors considered in the Determination as follows:</p> <p>Although the Determination gives due regard to international developments (including in the EU, GCC, SIDS and other Caribbean states), the findings were significantly premised on</p>

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				<p>regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services, SWD(2014) 298 pages 23-24), the European Commission ("EC") determined that fixed access voice telephony markets and fixed calling ("Market 1" and "Market 2" in EC parlance) no longer fulfil the "three-criteria test" necessary for justifying ex ante regulation. It is no longer a relevant market even if one were to accept the outdated market definition. There have been little further academic debates on this topic in the last several years. Research and analysis of fixed-to-mobile substitution have been drying up in the last 10 years because the debate is obsolete.</p>	<p>example, there is some subset of the communications market where lack of substitutability is a factor, it may be no longer relevant from a regulatory point of view. This is definitely the case for fixed voice.</p>	<p>evidence and data gathered in Trinidad and Tobago's domestic market. This is in keeping with global ICT evidence-based policy development, regulatory decision making, and the digital society measurement agenda (ITU 2023). Therefore, while the Authority observes developments in international jurisdictions, it notes that international market factors and the degree to which they are affecting the local market may differ based on the rate of technological advancement, income, education, culture and other socio-economic conditions.</p> <p>Based on the TATT-KCL Fixed Customer Survey, over 30% of respondents indicated, in the event of a SSNIP, they would do nothing (or pay the specific increase and continue their usage pattern), switch to a multi-service bundle (including fixed call services) or switch to another fixed landline service offering, whilst, 55% to 70% of respondents would continue to use either fixed voice (albeit making fewer calls) or mobile services.</p> <p>In Trinidad and Tobago, standalone fixed voice services still represent a high proportion of total fixed voice subscriptions, which was observed to be relatively stable in the five years under review. Based on data collected from concessionaires, approximately 75% of total fixed voice services were on standalone plans. The TATT-KCL Fixed Customer Survey also indicated that 20% would stop using the service entirely, whilst 74% of consumers would continue with fixed line service (25%)</p>

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						<p>and make fewer calls (49%). This suggests that, domestically, a hypothetical monopolist may profitably raise its price marginally on fixed and mobile voice services and, hence, the Authority has revised its conclusion that standalone fixed telephony services (fixed line rental and fixed calls) and mobile voice services do fall within the same market.</p> <p>However, the Determination notes the decline in fixed voice usage and the proliferation of other call services, namely, mobile and OTT services. Collectively, these datasets from the domestic market suggest that consumers are not entirely foregoing fixed voice services subscriptions but are able to engage in substitution on a call basis with mobile (being the largest recipient of any alternative service) and OTT services (albeit to a lesser degree) (Recall TATT-KCL Fixed Customer Survey Table 1 and Table 9). Therefore, there is only limited or insufficient demand-side or supply-side substitution between OTT services and fixed voice services. At this time, OTT services do not form part of the same product market as domestic fixed voice services. This result may change in the future.</p>

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9	2	Approach to Determining Dominance in Relevant Markets	TSTT	There is common practice not to identify bundled services as a separate market (as TATT is doing). High levels of bundling have been reported, particularly in relation to broadband access and fixed voice. However despite being a dominant trend observed at the retail level, defining a separate retail market for bundles is not helpful because evidence to date has not indicated that there is a need for ex ante regulation of bundles.	TATT should include in its review of markets a consideration of relevance.	<p>The Authority thanks TSTT for its comment but disagrees about the withdrawal of the relevant bundles market, and offers the following clarification:</p> <p>TSTT is asked to note that a market definition assessment is a distinct exercise to that of ex ante regulation. The establishment of market definitions is an exercise widely conducted throughout many jurisdictions around the world and is the process by which regulatory or competition authorities determine the set of products or services that are considered to be in the same economic market. Whilst market definition can be a prerequisite for imposing ex ante regulation, this is not the only basis for its development. Market definition exercises may inform other regulatory and competition-based assessments, investigations, or interventions. The existence of a relevant market does not infer the existence of dominance or of abuse of dominance, or any other market failure, distortion or impediment to competitive equilibrium. Identifying bundles as a relevant market does not imply that it requires ex-ante regulation and regulatory intervention. The inclusion of bundles as a separate market is based on the characteristics of the local market dynamics of consumer preferences.</p> <p>Figure 10 shows that, if faced with a price increase, most respondents with a multi-play bundle stated they would do nothing, cancel their current plan, or move to another multi-play</p>

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						bundle. Moreover, 48% of end users subscribed to multi-play bundles stated that these included both fixed broadband and fixed landline services. This indicates that uptake of fixed broadband and fixed landline multi-play services are significant and suggest that both services should be considered as separate markets or distinct markets of relevance.
10	2.1	Relevant Product Scope	CCTL	The market definition exercise is conducted entirely using the approach of the small but significant and non-transitory increase in price (SSNIP) test. The SSNIP test is a well-established analytical framework used in market definition, and is a useful conceptual framework employed by regulatory and competition authorities for determinations of significant market power. In its real-world application, the approach has weaknesses, and thought should be given to this reality in using the technique. SSNIP tests rely on the availability of a significant amount of high-quality data. To appropriately define the product and geographic scope of markets, detailed analysis of demand capturing all substitutes and complements, and considering all entities with assets and capabilities to satisfy customer needs must be included. In dynamic market environment there are fluid fast changing	Given the constant changes and innovations in the telecommunications sector we recommend that consideration be given as to whether the SSNIP test is adequate to define markets for the purpose of dealing with anti-competitive conduct, market harm and market failure issues.	<p>The Authority acknowledges that there are limitations to the SSNIP test and notes that quantitative forecast tools are often subject to various statistical sampling, amongst other margins of errors.</p> <p>In this regard, the Authority analysed a range of both qualitative and quantitative information, including the SSNIP HMT which is considered standard practice in market definition determination (ITU World Bank 2020). The test identifies the smallest relevant market through supply- and demand-substitutability of a certain focal product and is a well-established practice for defining relevant markets, both in competition inquiries and ex ante market definition (ITU World Bank , 2022). The SSNIP is a quantitative tool which provides for the robust and methodological assessment of the market definitions. However, the Authority also considered other factors when defining the relevant fixed telephony and broadband market boundaries, including product characteristics, uptake and usage trends, relative prices and supply-side substitution.</p>

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				<p>relationships of product / service substitutability, problems can arise in defining markets using the SSNIP test alone.</p> <p>In the telecommunications space, the constant changes and innovations at the technology and market, warrants that particular attention is needed defining markets using the SSNIP framework. The Authority highlighted the issue of rate balancing as a possible point of consideration in the analysis. However, given the substantive time that has elapsed in the industry including efforts to advance the take-up of fixed voice perhaps through contained prices, we would hasten to theorize that rate rebalancing is now a non-factor and absent. On the other hand, the raise of global digital platform players providing over-the-top services in competition with traditional telecommunications service providers is a game changing market development. In this context, market failure decisions may be more accurately informed by empirical evidence such as anti-competitive practices.</p>		<p>In reference to tariff rebalancing, this term was used within the Determination to explain that prices alone may not adequately reflect competitive levels. This constraint supported the use of other qualitative measures in addition to the SSNIP test to define the market boundaries of the fixed telephone and fixed broadband markets.</p> <p>Regarding anti-competitive practices, the Authority takes this opportunity to remind stakeholders of its legal remit, as per section 29 (2) (c) the Act, to establish price regulation regimes in cases where the Authority detects anti-competitive pricing or acts of unfair competition. This legal right is not dependent on any relevant market which the Authority may define.</p>
11	2.3	Relevant Geographic Scope	CCTL	In the market definition analysis, the Authority states, "...when determining the geographic scope of each market, the Authority's default assumption is that, in the absence of evidence to	In light of current market realities, in assessing the geographic scope of	CCTL's comments on the geographic scope of the markets are noted. In assessing relevant geographic markets, the Authority's considerations extended beyond a national default position but encompassed a range of factors including 1) network coverage

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				<p>the contrary, markets are national.” Contrary to the Authority’s default assumption, there is significant empirical evidence that the geographical scope of the market includes global OTT service providers, offering functionally similar voice and messaging services to those provided by national telecommunications service providers (TSPs).</p> <p>Market definition is not an end in itself, it is an initial step for assessing harmful market behaviour that requires some form of regulatory intervention to remedy. With the development of global digital platforms service providers, there are questions about the application of conventional market definition approach given the market dynamics. CCTL does not support the conclusion that the market is only national in scope. There is a need to consider the overwhelming empirical evidence in coming to a conclusion on the geographic scope of the fixed voice market.</p>	<p>the markets we recommend the use of forward-looking approaches in conducting market assessments.</p>	<p>data for each licensed concessionaire; 2) the range of retail fixed telephony and fixed broadband services provided by the relevant concessionaires within specific geographical regions, and the extent to which these may differ across the country; and 3) the prices charged by concessionaires for domestic retail fixed telephony and fixed broadband services, and the extent to which these may differ across the country. Notably, consideration was also given to retail fixed, mobile telephony and fixed broadband services available to domestic consumers by international players, i.e. OTTs.</p> <p>The Determination looks at the market considerations within the domestic market in accordance with the legal remit established in the Telecommunications Act. The analysis includes operators that provide telecommunications services in Trinidad and Tobago irrespective of the operator’s origin. Therefore, the impact of global service providers was considered in defining the market boundaries for Trinidad and Tobago. This is also consistent with the EU’s position that “the relevant geographic market comprises the area in which the undertakings concerned are involved in the supply and demand of products or services, in which the conditions of competition are sufficiently homogeneous, and which can be distinguished from neighbouring areas because the conditions of competition are appreciably different in those areas” (CCP UEA 2016).</p>

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12	3.1	Are Fixed Line Access and Managed VoIP- based Fixed Services in the Same Product Market	CCTL	Based on the information provided and the analysis presented CCTL concurs with the Authority's preliminary conclusion that traditional fixed line access services and managed VoIP-based services should form part of a single product market.		The Authority acknowledges CCTL's position and conformity with the conclusion that traditional fixed line access services and managed VoIP-based services should form part of a single product market.
13	3.2	Are Fixed Line Access and Domestic Fixed Call Services in the Same Product Market?	CCTL	Based on the information and analysis presented CCTL has no issues with the preliminary view that based on the demand-side considerations set out, that fixed line access and fixed calls should form part of a single product market.		The Authority acknowledges CCTL's non-objection on the conclusion that fixed line access and fixed calls should form part of a single product market. CCTL is advised of the revised Determination which, takes into account fixed to mobile voice substitution, and therefore, of the three distinct markets definitions as follows: (1) standalone fixed voice and mobile voice services, (2) standalone fixed broadband, and (3) multi-play bundles.
14	3.2	Are Fixed Line Access	Digicel	For the reasons set out below and elsewhere in this submission, Digicel does not agree that fixed	Digicel recommends the Authority gives	The Authority has considered Digicel's position that fixed line access and fixed call services should not be considered in the

Item	Section	Section Title	Stakeholder	Comments	Recommendations	TATT's Decision
		<p>and Domestic Fixed Call Services in the Same Product Market?</p> <p>Comparing the functionalities and characteristics of fixed line access and domestic call services, these services are more likely to be complements than substitutes.</p>		<p>line access and fixed call services should be considered in the same product market.</p> <p>Digicel submits that the Authority's contention that end users "must purchase a fixed line access product and handset in order to make and receive fixed calls" is an oversimplification and effectively ignores the reality of how end users communicate today.</p> <p>That is because the concepts of what constitutes a handset and end users' communication preferences have changed materially over time. As well as traditional fixed line handsets, many other types of devices are now used to connect to the end user's fixed line access service either via either wired or wireless means (such as WiFi). Such devices can (and do) include computer tablets and mobile phones, with calls being made via application software ("OTT apps").</p> <p>Importantly, an end user's decisions on how to make calls and to communicate with other end users via fixed line access can be made independently from the purchase of the fixed line itself, with such calls either being made either by</p>	<p>further consideration to the substitutability of OTT voice services and undertakes further analysis/assessments to understand how consumers make calls via their fixed network connections.</p> <p>Any such analysis/assessments should take into account the findings in DIS 2021.</p>	<p>same product market. However, for the following reasons, we do not agree with this position.</p> <p>The Authority's assessment of the product characteristics, usage, and evidence of customer switching indicates that fixed line access is not used independently but in conjunction with call and other telephony and broadband services.</p> <p>The TATT-KCL Customer Survey's Table 9, relating to action that would be taken if fixed landline service prices were increased, also revealed that 53% of respondents would do nothing, make fewer calls, or switch to another fixed line service. This suggests significant use of fixed call services. Furthermore, the assessment suggests that fixed line access and fixed call services should be considered in the same product market as end users purchase these services either as pay as you go (PAYG) or fixed voice bundled offerings, taking into account the characteristics of both fixed line access and fixed calls.</p> <p>Moreover, according to the TATT-KCL Fixed Customer Survey, end users (approximately 62.9% to 72.6% of the sample population) in Trinidad and Tobago use their fixed broadband connections to access the Internet and to make fixed calls through managed VoIP services. Both services are offered at similar retail prices, which is likely to result in end users switching to managed VoIP services in case of a SSNIP in fixed</p>

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		End users must purchase a fixed line access product and handset in order to make and receive fixed calls.		<p>traditional means or via an OTT app over the Internet.</p> <p>This is illustrated by the data that was obtained by the Authority through its National Digital Inclusion Survey 2021: Accelerating Digital Transformation, Final Report (“DIS 2021”).</p> <p>DIS 2021 found that 74% of households reported having a working fixed broadband Internet service, while only 26% of households had access to voice services .</p> <p>DIS 2021 also found that 75.1% of respondents used WhatsApp, 43.1% used Facebook Messenger, 26.1% used Zoom and 26.0% used Instagram .</p> <p>Moreover, for persons using OTTs, 79% access the services on a daily basis with median time spent calling and messaging using OTT applications on Wi-Fi specifically being 45 minutes per day .</p> <p>This compares with approximately 73% of people indicating that they spend less than 21 minutes</p>		<p>line access services. This suggests considerable demand for call services and joint demand for call services and fixed line access.</p> <p>Furthermore, the Authority’s conclusions outlined in the Determination were informed by domestic market dynamics and consumer preferences and hence could not ignore consumer realities vis-à-vis OTT usage.</p>

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				<p>making traditional fixed landline calls each week and suggests that the predominant mechanism for making calls over fixed lines is actually by the use of OTT apps such as WhatsApp.</p> <p>In the light of this data, Digicel submits it is not credible to argue that calls made via OTT apps are not substitutes for calls made via traditional fixed line handsets.</p> <p>This is especially the case given that the incremental cost of such OTT calls and messages is zero to the end user.</p> <p>The competitive impact of such “free” OTT calls perhaps goes some way to explain why fixed service packages are generally offered with “unlimited” voice calls.</p> <p>Regardless, there cannot be any reasonable doubt that:</p> <ol style="list-style-type: none"> 1. End users acquire OTT calls and messaging independently from fixed line access; and 2. end users use OTT calls and messaging as a substitute for traditional fixed line calls. 		

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15	3.3	Are Fixed Broadband Access Services in the Same Product Market as Fixed Voice Services?	CCTL	CCTL has no issues with the assessment and proposed preliminary conclusion of the Authority that it is reasonable to define three separate markets for standalone fixed voice (including both fixed line rental and fixed voice bundled services), standalone fixed broadband, and multi-play bundles.		<p>The Authority acknowledges CCTL's non-objection regarding the conclusion that it is reasonable to define three separate markets for standalone fixed voice (including both fixed line rental and fixed voice bundled services), standalone fixed broadband, and multi-play bundles.</p> <p>However, CCTL is asked to note that the Authority has revised its position in the Determination and has included mobile voice services as a part of the relevant domestic retail fixed voice market definition. This change was made considering the significant partial substitution observed (i.e., the reduction in consumption of fixed voice services and the related increase in the consumption of mobile voice service on a calls basis, as an alternative), which may constrain a hypothetical monopolist (HM) from profitably increasing the price of fixed voice and messaging services. This revision takes into consideration feedback received from stakeholders during consultation, additional operator metrics (including, significant customer switching on a calls or usage basis, constant service tariffs and declining financial earnings) and international best practices. Specifically, the Authority notes the revised European Commission Notice on the definition of the relevant market for the purposes of EU competition law, which permits taking into account usage metrics (partial substitution) and does not require</p>

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						<p>the exclusive use of perfect substitution (access metrics) for market definitions.</p> <p>Accordingly, the revised Determination takes into account fixed to mobile voice substitution, and the three distinct markets definitions as follows: (1) standalone fixed voice and mobile voice services, (2) standalone fixed broadband, and (3) multi-play bundles.</p>
16	3.4	Are Residential and Business Services in the Same Product Market?	CCTL	CCTL has no issues with the preliminary assessment that residential and business offerings should be considered as part of the same market for standalone fixed voice, standalone fixed broadband, and multi-play bundles.		<p>The Authority notes CCTL's non-objection over the conclusion that residential and business offerings should be considered as part of the same market for standalone fixed voice, standalone fixed broadband, and multi-play bundles.</p> <p>The Authority takes this opportunity to remind all stakeholders that the Determination only considers standard retail service offerings marketed to residential and SME customers, not any dedicated capacity and bespoke communications solutions offered to large corporate enterprise customers. This approach to residential and SME business services is in line with the Determination of Market Definitions in the Retail Domestic Fixed Voice Sector of Trinidad and Tobago 2009.</p>
17	3.5	Geographic Scope of the Product Markets	CCTL	The focus of this section is on whether there is a need to define sub national markets, within the national market. In assessing relevant geographic market (as discussed in 2.3 above), the	In light of current market realities, in assessing the geographic scope of	The Authority's definition of the product market and geographic market considered fixed telephony and fixed broadband services from concessionaires and global platform providers that are domestically available to consumers in Trinidad and Tobago.

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				<p>Authority's default assumption is that the market is national. While the markets for fixed access and fixed broadband could likely be assessed as national in scope, global platform providers participate in the market providing functionally similar voice and data services to those provided by licensed telecommunications service providers in the market. 1A report found that a significant proportion of the growth in data traffic in the Caribbean is driven by a small group of leading global platform providers. Based on the empirical evidence of unlicensed global players participating in the fixed voice market we do not support the Authority's preliminary conclusion that market for fixed voice should be defined at the national level.</p>	<p>the markets we recommend the use of forward-looking approaches in conducting market assessments.</p>	<p>The approach adopted in the Determination identifies the likely impacts of a hypothetical monopolist slightly increasing the price of a "focal product" (i.e., the product under consideration) from the competitive level. If a sufficient number of end users would be encouraged to switch to buying alternative products (i.e., there is sufficient demand-side substitution) and/or sufficient suppliers would be encouraged to switch to supplying the focal product (i.e., there is supply-side substitution), then such a price rise could not be profitably maintained. It is noteworthy that alternative non-focal products or services evaluated in the Determination (section 4.3) include OTT services provided by global platform providers which are available domestically to consumers in Trinidad and Tobago. This approach is in keeping with the norm of international telecommunications regulation to define markets as national, unless there are demonstrable regional variations in supply or demand. CCTL is advised that, whilst such variations to geographic boundary has been reported in electronic commerce and payment systems, these variations do not yet extend to telecommunications services (ITU World Bank , 2022).</p> <p>In assessing relevant geographic markets, the Authority's considerations extended beyond a national default position but encompassed a range of factors including 1) network coverage data for each licensed concessionaire; 2) the range of retail fixed telephony and fixed broadband services provided by the relevant</p>

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						<p>concessionaires within specific geographical regions, and the extent to which these may differ across the country; and 3) the prices charged by concessionaires for domestic retail fixed telephony and fixed broadband services, and the extent to which these may differ across the country. Notably, consideration was also given to retail fixed, mobile telephony and fixed broadband services available to domestic consumers by international players, i.e. OTTs.</p> <p>The Determination looks at the market considerations within the domestic market in accordance with the legal remit established in the Telecommunications Act. The analysis includes operators that provide telecommunications services in Trinidad and Tobago irrespective of the operator's origin. Therefore, the impact of global service providers was considered in defining the market boundaries for Trinidad and Tobago.</p>
18	4.1	Are Mobile Voice Services in the Same Product Market as	CCTL	The focus of this analysis is "...whether mobile services could be considered an effective substitute for fixed voice services (regardless of whether these services are provided on a standalone basis or as part of a multi-play bundle) and not the other way around." The Authority supports its preliminary conclusions that domestic		<p>The Authority acknowledges CCTL's non-objection with the initial conclusion that domestic fixed voice services (i.e., fixed line access and fixed voice bundled services) do not form part of the same product market as domestic mobile voice services.</p> <p>However, CCTL is asked to note that the Authority has revised its position in the Determination and has included mobile voice</p>

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		Fixed Voice Services?		<p>fixed voice access, voice and fixed voice bundled services is not in the same market as domestic mobile voice services on factors including, differences in product characteristics that limit substitutability, and that sufficient number of fixed voice service customers would not switch to mobile following a SSNIP test. It is also noted that a sizeable portion of the population subscribe to both fixed and mobile services. The noted decline in usage of both fixed and mobile services can be attributed to the availability of OTT service options. As it relates to pricing comparison, a mobile plan by nature will always be more expensive than fixed bundles plan because mobile provides the mobility, which represents a huge value-add. Therefore, on the face of it a price comparison should not serve as a sufficient factor for indicating substitution in the direction of mobile substituting fixed voice. Fixed service is a legacy service, and there is observed declining use and value to consumers. CCTL has no issues with the preliminary conclusion that domestic fixed voice services (i.e., fixed line access and fixed voice bundled services) do not form part of the same product market as domestic mobile voice services.</p>		<p>services as a part of the relevant domestic retail fixed voice market definition. This change was made considering the significant partial substitution observed (i.e., the reduction in consumption of fixed voice services and the related increase in the consumption of mobile voice service on a calls basis, as an alternative), which may constrain a hypothetical monopolist (HM) from profitably increasing the price of fixed voice and messaging services. This revision takes into consideration feedback received from stakeholders during consultation, additional operator metrics (including, significant customer switching on a calls or usage basis, constant service tariffs and declining financial earnings) and international best practices. Specifically, the Authority notes the revised European Commission Notice on the definition of the relevant market for the purposes of EU competition law, which permits taking into account usage metrics (partial substitution) and does not require the exclusive use of perfect substitution (access metrics) for market definitions.</p> <p>Furthermore, the Authority notes CCTL's comments on the decline in usage of both fixed and mobile services, and the availability of OTT service options. CCTL is reminded that the Determination also considers the availability of OTT services, added to the increase in subscriptions in fixed services and evidence of consumer switching (namely, only 6% would use OTTs in the event of a 5% increase in fixed voice service price).</p>

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						<p>These trends collectively indicate that consumers may switch on a call-by-call basis but will not give up their fixed voice service entirely in the event of a SSNIP.</p> <p>The Authority agrees that mobility represents a huge added value and is attributable to mobile plans being more expensive than fixed bundles plan. However, for the purpose of generating calls from a fixed location (the focal service), the incremental price point of mobile plans (as seen in sections 4.1.1.3 Table 13) can present a barrier to switching for vulnerable consumers. The Authority acknowledges that the protracted decline of fixed voice service is representative of a smaller market size in comparison to the mobile market. However, the Determination shows that, in the event of a SSNIP, customers would not give up their fixed voice line subscriptions entirely but would reduce their usage of fixed line minutes considerably. The TATT-KCL Fixed Customer Survey (Table 1) revealed that, in the event of a SSNIP of 5% in the price of fixed landline service, 20% of customers would stop using the service; over 60% would reduce the use of fixed voice service; and 15% would switch to mobile voice services on a calls basis (the largest % response of customers switching to any other alternative service). This indicates that the use of fixed line service is price elastic and the cross elasticity of demand is significant (as a disproportionately high percentage of persons would switch to using mobile voice minutes, on a call-by-call basis). This propensity to switch to</p>

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						<p>mobile voice service occurs despite the price differentials referred to in subsection 4.1.1.3 that is, the fixed voice plans represent a lower cost option than mobile prepaid and postpaid plans and thus, emphasizes the added value of mobility. Foremost, this propensity to switch to higher price mobile service, suggests that a hypothetical monopolist would be hampered in attempting to profitably increase the price of fixed voice service, due to considerable customers' reduction in fixed voice service use and customers switching to mobile services on a call or usage basis. Therefore, based on the above analysis, mobile voice services are sufficiently substitutable with domestic fixed voice services. This change has been reflected in the revised Determination.</p>
19	4.1	Are Mobile Voice Services in the Same Product Market as Fixed Voice Services?	TSTT	<p>The conclusions that fixed and mobile voice services are not substitutes are based on a shrinking market segment (fixed voice) and is backward-looking. Fixed voice minutes have decreased by more than 55% since 2018 and now only amount to 8.2% of the overall telecommunications market. Average voice ARPU has decreased by 80%. This decline is not due to the fact that voice communications are disappearing, but rather that voice</p>	<p>TATT must accept the reality of fixed-to-mobile voice substitution and that mobile voice and fixed voice services are in the same market. Should TATT deem regulatory protection of a small and</p>	<p>The Authority acknowledges TSTT's objection that mobile voice and fixed voice services are in the same market.</p> <p>TSTT is asked to note that the Authority has revised its position in the Determination and has included mobile voice services as a part of the relevant domestic retail fixed voice market definition. This change was made considering the significant partial substitution observed (i.e., the reduction in consumption of fixed voice services and the related increase in the consumption of mobile voice service on a calls basis, as an</p>

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				<p>communications have migrated to mobile and broadband platforms.</p> <p>Basing conclusions on an increasingly marginal segment of telecommunications consumers will continue to lead TATT away from the conclusion that most of the world already recognizes: fixed voice services are part of bigger convergence market including broadband and mobile services.</p>	<p>shrinking market segment important, it should deal with this through means such as general consumer protection regulation rather than this process of market review for possible sector-specific ex-ante regulation</p>	<p>alternative), which may constrain a hypothetical monopolist (HM) from profitably increasing the price of fixed voice and messaging services. This revision takes into consideration feedback received from stakeholders during consultation, additional operator metrics (including, significant customer switching on a calls or usage basis, constant service tariffs and declining financial earnings) and international best practices. Specifically, the Authority notes the revised European Commission Notice on the definition of the relevant market for the purposes of EU competition law, which permits taking into account usage metrics (partial substitution) and does not require the exclusive use of perfect substitution (access metrics) for market definitions.</p> <p>Therefore, the Authority notes that there is demand-side substitutability between fixed-to-mobile and fixed-to-broadband on a call-by-call basis. The TATT-KCL Fixed Customer Survey indicated that between 73% and 78% of respondents who subscribed to fixed landline and call-only services (i.e., standalone fixed voice services) would not switch completely to mobile voice services following a SSNIP, but would switch to mobile on a call-by-call basis.</p> <p>This indicates that a significant volume of customers would not give up their fixed voice service entirely in the event of a SSNIP and would instead use their mobile service on a call-by-call basis</p>

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						<p>which, suggest that mobile voice services are considered substitutes by a significant proportion of the fixed voice market. This is also supported by the TATT-KCL Fixed Customer Survey which shows a strong cross-elasticity coefficient (of 3), given a 15% increase in the quantity demanded of mobile service (the non-focal service) to a 5% increase in the price of the focal product fixed voice service (XED represents cross elasticity of demand, $XED=3$; where $XED > \text{unitary}$, XED are strong or significant substitutes).</p> <p>The Determination has been revised to explicitly state that there is sizeable access for customers willing to switch between fixed and mobile voice services on a call-by-call basis, if they wish to do so, based on product characteristics and the domestic mobile service penetration rate. The Determination also proposes that demand-side substitutability from fixed-to-mobile voice services could hamper a hypothetical monopolist from profitability increasing tariffs on fixed voice services. Thus, although the majority of survey respondents subscribed to fixed landline and call-only services would not switch to mobile voice services completely (i.e. forego access to their fixed voice service/subscription) following a SSNIP, but would switch to mobile on a call-by-call basis, mobile voice services are sufficiently substitutable with domestic fixed voice services.</p>

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20	4.1	Are Mobile Voice Services in the Same Product Market as Fixed Voice Services?	TSTT	The demand survey provides ample evidence of the increasingly marginal nature of the fixed voice market. In particular, page 21 and Figure 4 (page 22) of "the Determination: Domestic Retail Fixed Telephony and Fixed Broadband Market Definition" which refers to Figure 17 on page 23 of the "Final Report – Customer Survey of the Domestic Retail Fixed Market of Trinidad and Tobago" ("the Survey") states that "more than 50% also used their landline to call other fixed landline customers either in their same networks or in other networks", which means that almost half of the fixed landline customers are not using fixed voice originating calls. TATT'S data from its "Annual Market Report 2022: Telecommunications and Broadcasting Sectors - issued by Telecommunications Authority of Trinidad and Tobago" demonstrates that 9 out of 10 voice minutes in Trinidad and Tobago are from mobile. Total mobile originated voice minutes are 3.2 billion. Regarding off-net fixed originated calls, 60% are to mobile subscribers which also confirms the fixed to mobile substitution.	TATT must accept the reality of fixed-to-mobile voice substitution and that mobile voice and fixed voice services are in the same market. Should TATT deem regulatory protection of a small and shrinking market segment important, it should deal with this through means such as general consumer protection regulation rather than this process of market review for possible sector-specific ex-ante regulation	The Authority is appreciative of TSTT's feedback and acknowledges substitution trends between fixed voice and mobile services, as was mentioned in the revised Determination. Specifically, the revised Determination illustrates, in Figure 5, there was a decreasing trend in average monthly usage for both PAYG and fixed voice bundled customers over the five-year period under review. The Authority also notes that the share of fixed-to-fixed calls declined in the five years under review but still accounts for 55% of total domestic traffic. Conversely, the share of fixed-to-mobile calls increased considerably, from 26% to 45% of total domestic traffic. This suggests relative growth in traffic terminating on the mobile voice networks when compared to traffic over the fixed voice networks. Specifically, the Authority considered this trend in the assessment, as the Determination in section 4.1.1.4 Switching Behaviour, referencing TATT-KCL Fixed Customer Survey as indicating that between 73% and 78% of survey respondents subscribed to fixed landline and call-only services (i.e., standalone fixed voice services) would not switch to mobile voice services following a SSNIP completely but would switch to mobile on a call-by-call basis. The Determination has been amended to reflect substitution of fixed-to-mobile voice service more precisely. The revised document will explicitly state that demand-side substitutability from fixed-to-mobile services could hamper a hypothetical

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						monopolist's profitability following a SSNIP in its fixed voice service.
21	4.1	Are Mobile Voice Services in the Same Product Market as Fixed Voice Services?	TSTT	The existence of a price differential between fixed and mobile voice is not evidence of lack of substitutability. Price differences between mobile and fixed access reflected the fact that mobile has more and features and functions than fixed access, such as mobility. But this does not undermine the fact of substitutability. In a similar sense, a smartphone is more expensive than an mp3 player or low to mid-range digital cameras. However, it is incontrovertible that smartphones substitute for such products and directly explain the decline of the stand-alone markets for them.	TATT must accept the reality of fixed-to-mobile voice substitution and that mobile voice and fixed voice services are in the same market. Should TATT deem regulatory protection of a small and shrinking market segment important, it should deal with this through means such as general consumer protection regulation rather than this process of market review for possible sector-specific ex-ante regulation	<p>The Authority is appreciative of TSTT's comment and acknowledges that mobile voice services have more features than fixed voice services which are reflected in the price differentials. However, the TATT-KCL Fixed Customer Survey has indicated that fixed services tend to be more reliable and of a higher quality than mobile services, which is a distinguishing factor in the two markets. These characteristics – reliability and simplicity – of fixed voice service may explain the continued use of fixed voice service today, despite the evolution of mobile and the increased technological advancement in mobile services. According to the TATT-KCL Fixed Customer Survey, end users in Trinidad and Tobago associate a higher level of service availability and reliability of domestic fixed voice services (i.e., the ability to access landline call services more reliably than mobile call services where needed) compared to domestic mobile voice services. The Authority is therefore mindful about not leaving this segment of ICT consumers behind, which is consistent with the global universal service agenda to ensure the inclusion of potentially underserved or technologically challenged consumers.</p> <p>Notwithstanding the importance of subscribers to fixed voice services, the TATT-KCL Fixed Customer Survey indicated that 15% of customers would switch to mobile services in the event</p>

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						<p>of a SSNIP on fixed voice (the focal service). This suggests strong substitutability on a per-call basis. The Determination, in section 4.1.1.4 Switching Behaviour, acknowledges this substitutability, stating that between 73% and 78% of survey respondents subscribed to fixed landline and call-only services (i.e. standalone fixed voice services) would not switch completely to mobile voice services following a SSNIP, but would switch to mobile on a call-by-call basis.</p> <p>The Determination has been amended to explicitly reflect substitution of fixed to mobile voice service, as provided by the fixed customer switching evidence.</p>
22	4.2	Are Mobile Data Services in the Same Product Market as Fixed Broadband Services?	CCTL	CCTL has no issues with the analysis presented, to support the preliminary conclusion that domestic retail mobile data services do not form part of the same product market as domestic retail fixed broadband services.		The Authority acknowledges CCTL's non-objection to the conclusion that domestic retail mobile data services do not form part of the same product market as domestic retail fixed broadband services.
23	4.2	Are Mobile Data Services in the Same Product	TSTT	Substitution pressure for fixed broadband from mobile broadband continues to intensify as 4G services are available throughout the country. Mobile broadband penetration with 4G penetration is approaching 95% based on GSMA	TATT should take a forward-looking approach to regulation; acknowledge that	The Authority notes TSTT's feedback and takes into account that, in the future, fixed to mobile data substitutability is likely to increase with further technological advancements, including greater 4G penetration and the implementation of 5G. Additionally, the Authority is aware that, in theory, any Internet

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		Market as Fixed Broadband Services?		<p>Intelligence and GSMA Mobile Connectivity Index. https://www.mobileconnectivityindex.com/index.html#year=2022&zonelsocode=BRA,TTO&analysisView=TTO.</p> <p>TATT's annual report figures count number of mobile broadband subscriptions 2.2 more than fixed (859.1k mobile subscribers vs. 389,6k fixed broadband subscribers. Introducing 5G increases the difference even more in favor of mobile services. In Trinidad and Tobago's telecommunications market, there is significant growth of mobile broadband users; an increase of 27% within the period of four years (from 679k in 2018 to 859k in 2022). See Figure 60 on page 61 of TATT'S "Annual Market Report 2022: Telecommunications and Broadcasting Sectors-issued by Telecommunications Authority of Trinidad and Tobago"</p>	mobile and fixed broadband are increasingly substitutable; and accept that mobile data and fixed broadband services are in the same product market.	<p>connection at a given speed, whether provided over a mobile data connection or fixed broadband, may offer similar functionality to an end user. The above point is considered in the Determination (see Section 4.2.1 Demand-side Substitution).</p> <p>The differences between these services, inferred from product characteristics, complementary usage trends, evidence of customer switching and supply-side challenges, suggest partial or limited substitutability between mobile data services and fixed broadband services, as discussed in section 4.2 of the Determination.</p> <p>The Determination takes into account technological developments in its assessment of substitutability between fixed and mobile services. The revised Determination also acknowledges network buildout and the likely increase in substitutability. Furthermore, noting the rapidly evolving market, the Authority proposes to conduct a review of the fixed voice market definition in a three-to-five year period where applicable in light of trends in OTT technology platforms.</p> <p>The Determination has therefore been amended to reflect expectations around increased fixed-to-mobile data substitutability following future technological innovation (see section 4.1.1.2).</p>

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24	4.2	Are Mobile Data Services in the Same Product Market as Fixed Broadband Services?	TSTT	With high mobile penetration, quality, and investment into mobile networks (LTE, etc.), it is obsolete to discuss the advantage of fixed voice services' reliability and availability. Based on TATT and TSTT's data mobile 4G coverage is 95%. In addition, TATT admits if the country has complete mobile coverage "Mobile end users" ability to make and receive calls depends on the extent of mobile network coverage. However, TATT understands complete geographic coverage is available in Trinidad and Tobago.	TATT should take a forward-looking approach to regulation; acknowledge that mobile and fixed broadband are increasingly substitutable; and accept that mobile data and fixed broadband services are in the same product market.	<p>The Authority notes TSTT's comments on fixed to mobile substitutability.</p> <p>In accordance with the Determination, the Authority concludes that domestic retail mobile data services do not form part of the same product market as domestic retail fixed broadband services. For domestic retail fixed broadband services, there is no supply-side substitutability, as these services are provided under distinct licences and are delivered via different network technologies. There is also limited demand-side substitution, due to considerable differences in product features and end users' preferences.</p> <p>The Authority is cognisant that fixed-to-mobile voice substitutability is possible and occurring on a call basis (see section 4.1.1.4 Switching Behaviour) and could increase with further technological advancements.</p> <p>TSTT is also asked to note that a 4G mobile data coverage of 95% does not automatically equate to an adoption and subscription rate of the same.</p> <p>The Determination has been amended to address the substitution of fixed-to-mobile voice services more explicitly.</p>

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25	4.3	Are OTT Services in the Same Product Market as Fixed Voice Services?	CCTL	In assessing whether OTT services are in the same product market as fixed voice services, the Authority states that limited demand and supply side substitution means that they do not belong to the same relevant market. To support this view, the Authority highlights differences between OTT voice and traditional fixed voice services such as the fact that common OTT apps only allows intra platform calls, and reduced convenience owing to the need for an internet connection, plus the need to turn on a device and open a software. However, the preponderance of empirical evidence does not support a finding of limited substitutability. OTT voice applications such as WhatsApp are a major part of the communication tools of many, whether by direct text messaging or voice calls. 2According to the National Digital Inclusion Survey 2021, a high proportion of the population of Trinidad and Tobago (83%) reported using OTT services with the majority accessing through fixed broadband connections at home (86%). Additionally, as discussed in the consultation document results from the TATT-KCL Fixed Customer Survey 2022, reports that 40% of respondents indicate that the usage of OTT apps has impacted the use of fixed call services. These	In light of the titanic shifts in the market on the technological development, changes in market dynamics and consumer preferences supported by the preponderance of empirical data showing the decline in usage and revenues from fixed voice services, we recommend that the preliminary conclusions that OTT voice services are not part of the product market for fixed voice services be revisited in this process. We noted the Authority's statement that it will review the Determination of the Fixed Retail market	<p>The Authority appreciates CCTL's discussion and view of OTT's substitutability with fixed voice and its own position within the product market for fixed voice services. However, based on the information reviewed and discussed herein, the Authority finds that OTT services do not fall in the same market due to limited demand-side and supply-side substitution at this time.</p> <p>The Authority acknowledges that there is a high adoption rate of OTTs in the domestic market and that the majority of fixed broadband consumers use their connection for fixed voice calls. For example, the TATT-KCL Fixed Customer Survey, Table 12, which presents the ranking of uses of fixed broadband Internet services, indicates that 62.9 % of respondents use their fixed broadband service for making calls (telephoning over the Internet/VoIP). Additionally, Figure 53, which depicts third-party OTT applications used on a computer — desktop, laptop, or tablet without a SIM card, also shows that approximately 73% of fixed broadband respondents use one or more OTT applications, with WhatsApp (at 21.3%), Facebook Messenger (16.3%) and Zoom (14.5%) being the top three applications used.</p> <p>However the Authority also considers the sensitivity of consumers to a SSNIP and the degree of substitutability between OTT and fixed voice calls. Table 9 of the TATT-KCL Fixed Customer Survey, showing the action that consumers would take</p>

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				<p>are clear evidence that increasing the price of fixed lines service could not pass aSSNIP test. Any price increase in fixed line could not sustain an increase in revenues over the short nor medium term. The TATT-KCL Fixed Customer Survey 2022 survey results also indicate that 28% of consumer will not alter their consumption of fixed line services in the event of a price increase, which indicates that the majority will make less calls, stop using landlines or switch completely to a different service. This is further indication that a price increase in fixed voice service could not be profitable. Based on reporting from the Authority between 2015 and 2021 fixed voice revenues declined by 54% and average revenue per user by 39%. Over the same period fixed broadband revenue increased by 60% and average revenue per user by 20%. Subscriber maintaining their fixed line shouldn't be viewed as sufficient reason to indicate that fixed voice is not competing directly with other forms of voice services. At this point in the market and going forward into the short and medium term, OTT voice applications will continue to see increased usage, especially given that in many cases these services are free to access over the internet. The</p>	<p>definitions within three years. Taken against the background of the fourteen years gap between that previous we consider a three-year timeline very short. More importantly given the impacts that the OTTs are having on the domestic market urgent actions are needed to correct the regulatory imbalances and anticompetitive market situation.</p>	<p>if their fixed landline service price increased, also confirms a high degree of price elasticity of demand, as 25% of respondents indicated that they would do nothing (or pay the specific increase and continue as normal), 62% would make few calls or reduce consumption by a percentage, – 20% would stop using fixed landlines to make calls and 6.7% would make fewer calls but use OTT voice or messaging (such as WhatsApp, iMessage or WeChat) instead. This is a strong response in quantity demand to changes in price, however, only a small volume of customers would switch from fixed voice to using OTT voice and messaging services on a call-by-call basis. This demand response is insufficient for a price increase on fixed and mobile voice services to be unprofitable. A stronger and significant customer switching response to OTTs would be required for a SSNIP on fixed and mobile voice services to be unprofitable and for OTTs to form part of the relevant product market.</p> <p>The Authority is also of the view that there is no supply-side substitution between OTT and domestic fixed voice services in Trinidad and Tobago. This is due to the high barriers to entry into the fixed services market, in terms of the need to deploy fixed network infrastructure and develop a retail distribution network. Furthermore, only a small proportion of survey respondents of these end users mentioned that they would make fewer calls but increase their consumption of OTT services in the event of a SSNIP.</p>

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				<p>Authority states that OTT messaging services are not likely to substitute for fixed voice calls as they do not offer immediate and interactive two-way conversations. CCTL strongly disagrees with this statement. As an example, WhatsApp provides interactive two voice calls as well as two-way messaging. The survey results importantly indicate that 48% of respondents acquired a fixed broadband service to access OTT services and a whopping 28% of respondents make fewer calls from fixed landline as a result of OTT usage. These figures are expected to grow even much bigger in the near-term future. This underscores the importance of OTTs services to consumers. For the supply substitution side of the conversation the market and technology has moved on. Domestic voice is no longer tied to a technology. Domestic voice can be delivered in large capacity by many other types of technologies and therefore operators no longer willing to invest in building new fixed infrastructure to deliver voice in the way it once was delivered. No longer are voice only infrastructures been built as was the case in the past. Today a single infrastructure is being deployed to run both voice and data using various</p>		<p>Therefore, in light of the foregoing, OTT services can be seen as substitutes for fixed voice calls services only on a marginal call or usage basis. Given that consumers are not giving up their fixed voice services entirely (i.e. forego access to their fixed voice plan/ service) by switching to OTTs, and given that a hypothetical monopolist is likely to increase prices by a SSNIP on the smaller group of services (fixed access, fixed call and mobile voice services) profitably, by definition, OTT services do not fall within the same market as fixed voice calls, at this time.</p> <p>With respect to the broadband market, the Authority considers that there is supply-side substitution between fixed voice and fixed broadband services. Due to the emergence of VoIP, traditional fixed voice and VoIP services can be delivered through similar infrastructure that shares components and end users are commonly unable to distinguish whether their calls are conveyed as data packets or not.</p> <p>Furthermore, the Authority acknowledges that both voice and data networks can be used to deliver voice services from a fixed location. This is outlined in section 3.3.2 Supply-Side Substitution, where the Authority notes that there is supply-side substitution between fixed voice and fixed broadband services in Trinidad and Tobago, irrespective of whether these are sold on a standalone basis or as part of multi-play bundles.</p>

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				<p>transportation technologies such as VoLTE. Therefore there are no longer any barriers to delivering domestic voice especially from a fixed location. In light of the overwhelming empirical evidence CCTL does not agree with the Authority's preliminary assessments that OTT voice services do not form part of the same product market as domestic fixed voice services. It is our considered view that there is sufficient technology available with the capacity to facilitate the completion of domestic voice call from a fixed location with the required voice quality, and that is cost effective. There are sufficient demand side and supply side substitutions within the market.</p>		
26	4.3	Are OTT Services in the Same Product Market as Fixed Services?	Digicel	<p>Digicel is concerned that the Authority has substantially understated the impact of OTT Services on fixed voice services both in terms of supply side and demand side substitution and appears to misunderstand the mechanisms by which OTT services are supplied and consumed.</p>		<p>The Authority thanks Digicel for its comments on mobile devices or devices with a SIM card via fixed networks in the TATT-KCL Fixed Customer Survey. The Authority wishes to clarify that the conclusions of the Determination did not exclude consumers who generated calls made by any device with a SIM card via fixed networks. The Authority notes that the question on the ranking of uses of fixed broadband Internet services (Table 12 of the TATT-KCL Fixed Customer Survey) is technology</p>

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		<p>OTT services share some similarities with fixed voice services. However, whilst OTT voice services are commonly offered at a significantly lower price than fixed voice services, limited substitutability from the demand side and supply side indicates that they do</p>		<p>This may be as a result of the market survey not asking respondents the right questions and excluding calls made by any device with a SIM card via fixed networks from consideration under the TATT-KCL Fixed Customer Survey 2022.</p> <p>In this light, the Authority's reliance on the results of the TATT-KCL Fixed Customer Survey 2022 results claiming that "37.2% of respondents indicated that the main advantage of fixed landline service compared to OTT call/messaging service is the service accessibility (i.e., to reach all people), followed by quality of service (i.e., more reliable)" must be called into question.</p> <p>That is because the survey question specifically excluded devices with SIM cards (including mobile phones connecting to the fixed network via WiFi) and by doing so, effectively eliminated the most convenient form of access from consideration by respondents.</p> <p>Digicel does not understand why such a key means of access to fixed networks has been excluded from consideration.</p>		<p>neutral and therefore includes respondents that access fixed networks via mobile phones, tablets and other access devices. Thus, the Authority disagrees with Digicel's' position that it has understated the impact of OTT services on fixed voice services.</p> <p>The Authority also refutes the operator's statements on the mechanisms by which OTT services are supplied and consumed. The following provides further clarification on the Authority's considerations of the interdependencies of OTT services in the domestic market.</p> <p>The Authority's findings on OTTs were informed by local market developments and customer preferences. The TATT-KCL Fixed Customer Survey provided a range of customer responses on OTT usage. For example, Figure 12, on the uses of fixed broadband Internet service, shows that 62.9% of respondents reported that they used the Internet for making VoIP calls. Figure 53, addressing third-party OTT applications used on a computer — desktop, laptop, or tablet without a SIM card, reveals that approximately 72.6% of respondents use at least one OTT application. Figure 56, presenting the frequency of use of OTT third-party applications, shows that 84.2% of respondents admitted to using OTT applications several times a day.</p> <p>These references further indicate that the Determination captures the significant use of OTT applications in the domestic fixed</p>

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		not belong to the same relevant market.				<p>markets jointly with fixed voice services' subscriptions. This suggests the existence of a complementary relationship between OTTs and fixed voice services at the level of access or subscription. Customers will not give up their fixed voice plan entirely (i.e., forego access to their fixed voice plan) but, will continue to use their fixed voice service (albeit to a lesser degree) and only a small proportion will substitute from their fixed voice service on a per call or usage basis to OTT voice, video or messaging services.</p> <p>Digicel is also asked to note that persons using OTT applications on their mobile devices will be captured in the mobile telephony market definition assessment. Further, as outlined above, OTT use via phones to fixed networks via Wi-Fi was not excluded from the Determination. Technology neutral questions on the ranking of uses of fixed broadband Internet services captured responses from these types of (mobile) users or device connections.</p> <p>Digicel is also asked to consider Table 11 on the way that OTT calls/messaging would be used if there is an increase in the price of fixed landline service. The table reveals that only 16 out of 224 respondents selected the option to make fewer calls but use OTT calling instead, or make fewer calls but use OTT messaging instead. Furthermore, in Table 9, of the 16 abovementioned respondents, 61.5% made calls/sent messages on OTTs on their</p>

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						<p>fixed Internet service, and 38.5% made/sent OTT calls/messages using their mobile data service (of the lowest monthly expenditure category, \$50–\$99).</p> <p>This proves that consumers who use mobile phones to access OTT applications have not been excluded from the evidence considered by the Authority in the TATT-KCL Fixed Customer Survey.</p>
27	4.3	Are OTT Services in the Same Product Market as Fixed Voice Services?	TSTT	<p>The Survey also demonstrates that it is no longer the case that users mainly used broadband connections to access Internet, as customers used their broadband connection for different purposes, including making calls through managed VoIP services. As indicated in table 12. "Ranking of uses of fixed broadband Internet Service " (found on page 37), 63% of survey respondents using standalone broadband services stated that they mostly use their broadband connection for managed VoIP calls and third-party application voice calls as their use selection.</p>	<p>TATT must accept that OTT services and fixed voice services are part of the same market. Should TATT deem regulatory protection of a small and shrinking market segment important, it should deal with this through means such as general consumer protection regulation rather than this process of market review for possible sector-</p>	<p>The Authority acknowledges TSTT's feedback but is not in agreement with TSTT's position of fixed voice service and OTT services belonging to a single market for the following reasons:</p> <p>Firstly, although the Determination takes into account the purposes for which fixed broadband Internet is used, and which includes voice calls, this characteristic is considered one among a cadre of other indicators. Further indicators assessed in the Determination include uptake and usage trends, product characteristics, evidence of customer switching and supply-side substitutability.</p> <p>Secondly, the Determination indicates that OTT services delivered over the open Internet typically offer lower quality of service and provide very limited or no customer support. Moreover, there is no evidence to suggest that end users are giving up fixed telephony services altogether or are dependent</p>

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					<p>specific ex-ante regulation.</p>	<p>on OTT services exclusively to meet their communication needs (i.e., foregoing access to their fixed voice plan or service) .</p> <p>Further, although demand for fixed voice traffic has decreased on a call basis, the total number of fixed voice subscriptions has continued to grow marginally in recent years, at an annual rate of 0.19%. Based on the TATT-KCL Fixed Customer Survey, only 6.7% of the relevant respondents mentioned that they would make fewer calls but increase their consumption of OTT services. This highlights that, although there is some marginal degree of substitution between both services, there also exists a complementary relationship, as evidenced by end users' uptake of both services.</p> <p>TSTT is also asked to recall that the largest groups of responders indicated that they would “do nothing” and “make fewer calls” (48%) and “would do nothing, make few calls or switch to another fixed line product (53%)”. This suggests that persons would not give up their fixed voice service entirely but, on a call basis, could switch if they wanted to.</p> <p>The Authority, in considering the evolution in customer preferences in section 4.3.3. Preliminary Conclusions, indicates that the demand for OTT services by consumers in Trinidad and Tobago is likely to increase in the future.</p>

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						TSTT is asked to consider that the SSNIP evaluation identifies the smallest group of services on which a hypothetical monopolist could raise its prices profitably, and does not include all possible group substitutes.
28	4.3	Are OTT Services in the Same Product Market as Fixed Voice Services?	TSTT	The Survey data show that 48% of respondents stated that OTT services affected the usage of fixed voice and fixed broadband services. There is global confirmation of the impact of OTT service on traditional voice: the development and demand for OTT services, which is the result of the increase availability of broadband over fixed and mobile platforms; increase of OTT as an alternative to electronic communications services normally provided by operators, such as voice calls and SMS; and the market disruption of these free services.	TATT must accept that OTT services and fixed voice services are part of the same market. Should TATT deem regulatory protection of a small and shrinking market segment important, it should deal with this through means such as general consumer protection regulation rather than this process of market review for possible sector-specific ex-ante regulation.	<p>The Authority thanks TSTT for its comments and clarifies the following. The establishment of the relevant market boundary does not imply that ex ante regulation will be imposed. Indeed, although it can be used for said regulation, the process of ex ante regulation typically requires other findings, including findings of abuse of dominance or other impediments to competitive equilibrium.</p> <p>The Authority is mindful of the empirical cases of substitutability outlined by TSTT and non-substitutability in the Caribbean and Gulf territories cited in the Determination. For this reason, the Authority premises its conclusion on substitution between fixed voice and other non-focal services on evidence derived from our domestic markets.</p> <p>As mentioned in sections 4.3.1.4, less than 6.7% of the relevant respondents mentioned that they would make fewer calls but increase their consumption of OTT services in the event of a SSNIP. This suggests that persons would not give up their fixed voice service entirely or forego access to their fixed voice plan/service, in the event of a permanent increase in prices on fixed voice service by a small but significant value.</p>

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						<p>Based on the TATT-KCL Fixed Customer Survey, in the event of a SSNIP, approximately 20% of customers would do nothing, whilst 77% would make fewer calls but continue to use fixed voice service. This suggests that consumers are responsive to changes in the price of fixed voice services and significantly more so on the basis of their usage or per call. Given that most fixed voice call tariffs are zero rated, prices are unlikely to be increased profitably at the call rate. This suggests fixed voice services do not constitute a singular market on their own as there is strong and significant degree of substitution from fixed voice service at the usage and access level (to a lesser degree). This is further evidenced by constant and declining PAYG fixed voice tariffs for more than five years (see Figure 6 fixed voice services prices 2018–2023 in the Determination).</p> <p>However, given the small group that would consider switching to OTT services, this product remains only a limited demand-side substitute to the focal service. Conversely a significantly stronger degree of substitution was observed between fixed voice services and mobile voice service, which formed the basis of fixed to mobile substitutability noted in the Determination.</p> <p>The Authority is in agreement about the dynamism of communication services, shifts in consumption patterns in the post-pandemic era, and evolving trends in OTT applications. Hence, the Determination explicitly states that the domestic</p>

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						<p>retail fixed telephony and broadband market definitions should be reviewed in the subsequent three-to-five years.</p> <p>TSTT is asked to consider that the Determination has been revised to accurately reflect substitution of fixed-to-mobile voice service.</p>
29	4.3	Are OTT Services in the Same Product Market as Fixed Voice Services?	TSTT	The 2018 TATT-CMR Survey revealed that OTT services adoption approximated 132 of 1000 respondents or 10% the population, whereas, the present TATT-KCL customer survey 2022 has reported an adoption rate of 63% of fixed internet subscribers. This represents a major increase in OTT service adoption and supports increased actual usage of OTTs.	TATT must accept that OTT services and fixed voice services are part of the same market. Should TATT deem regulatory protection of a small and shrinking market segment important, it should deal with this through means such as general consumer protection regulation rather than this process of market review for possible sector-specific ex-ante regulation.	<p>The Authority, in recognition of the advancements and progressive trend in the uptake of OTT services domestically, has agreed, in the Determination, to undertake a review of the market within a three-to-five year period.</p> <p>The Authority also seeks to obtain a clearer picture of the trends in the use of OTTs and would have asked TSTT, inter alia, to supply any information it has on OTT traffic. The Authority looks forward to any datasets which may be shared by all operators on OTT traffic domestically in line with its previous requests. Additionally, all operators were also requested to submit data on each operator's costs, to supplement the assessment of profitability of the price changes of the various market segments.</p> <p>As mentioned in sections 4.3.1.4, less than 6.7% of the relevant respondents mentioned that they would make fewer calls but increase their consumption of OTT services in the event of a SSNIP. This suggests that persons would not give up their fixed voice service entirely or forego access to their fixed voice plan/</p>

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						service for OTT services, in the event of a permanent increase in prices on fixed voice service by a small but significant value.
30	4.3	Are OTT Services in the Same Product Market as Fixed Voice Services?	TSTT	The Survey structure suffers from distortions. For example, why ask what are the advantages of fixed landline service compared to OTT services, and not vice versa? The survey is structured more to support an argument of non-substitution.	TATT must accept that OTT services and fixed voice services are part of the same market. Should TATT deem regulatory protection of a small and shrinking market segment important, it should deal with this through means such as general consumer protection regulation rather than this process of market review for possible sector-specific ex-ante regulation.	<p>The Authority acknowledges TSTT's comments on the survey's focus on the advantages of fixed line service over OTTs. TSTT is asked to note that, in fact, an entire question on the reverse position was also included in the survey.</p> <p>Additionally, in accordance with the SSNIP methodology all questions must be centered around the focal services, primarily to maximize the value of the responses from the questions asked. Figure 50 presents data on the ranking of two key disadvantages of a fixed landline service compared to OTT call/messaging services by respondents.</p> <p>The Authority assures TSTT that fairness and balance was not comprised in the sequence, structure or volume of questions contained in the TATT-KCL Fixed Customer Survey, as clarified in the following.</p> <p>In Figure 22 of the survey, data on the ranking of two key advantages of fixed landline services compared to OTT call/messaging services, the option of stating "non advantage" as a response was also included. This caters to consumers who do not believe there to be any advantage of fixed line access, and</p>

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						thereby limits potential biasing of the results in compared to OTT call/messaging services.
31	4.3.1.1	Product Characteristics OTTs can offer users additional functionalities, including the ability to message and make video calls. However, most OTT customers are only able to receive calls from other users of the same OTT	Digicel	<p>In Digicel's opinion, the Draft Determination also overstates the constraints on OTT's usefulness as a communications medium and, consequently, OTT's effectiveness as a substitute or competitor with traditional voice calls.</p> <p>The Authority's assertion appears to be founded on the belief that as calls need to be made within the OTT App ("intra platform") and that "inter platform" calls are, for the most part, not possible, customers will be disinclined to use the service as a substitute for traditional fixed calls. This asserted limitation is claimed to be "one of the main challenges to demand-side substitution between OTT and traditional fixed calls".</p> <p>However, this seems to ignore the huge take up of OTT apps (both within and outside Trinidad and Tobago – see comments below) and the existence of communities of interest whereby groups of individuals coordinate their app and messaging</p>		<p>The Authority gives due regard to Digicel's argument that there is no need to "open the OTT software" prior to making or receiving a call. The Authority further notes that this would also apply to personal devices such as tablets, laptops and desktops, which give consumers unfettered access to downloading various OTT applications via their fixed networks. This facilitates accessing and making and/or receiving voice/video calls from multiple OTT applications and negates the interoperability /convenience of end user.</p> <p>The Authority's decision on the inclusion or exclusion of OTTs in the relevant fixed voice market was informed by a multiplicity of factors, including product characteristics, relative prices, and domestic evidence of customer switching. Paramount to this is the response by fixed line customers to a SSNIP. According to the TATT-KCL Fixed Customer Survey, only a small proportion of these end users (6.7% of the relevant respondents) mentioned that they would make fewer calls but increase their consumption of OTT services.</p> <p>However, although consumers may not switch entirely to OTTs for a given SSNIP, considering the ease of switching and the</p>

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		<p>provider, due to the lack of a personal geographic number associated with the OTT platform. Furthermore, even where OTT users can receive calls originating from outside their OTT platform, these cannot be originated from other OTT apps, only from</p>		<p>choices. This happens at both the consumer and business level.</p> <p>This take up was highlighted in the following table taken from page 88 of DIS 2021 and shows that more than 75% of respondents use WhatsApp alone.</p> <p style="text-align: center;">Table 4.9: Telecommunications OTTs used, by age group</p> <table border="1"> <thead> <tr> <th>OTT Services</th> <th>Under 15</th> <th>15-24</th> <th>25-74</th> <th>75+</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>WhatsApp</td> <td>39.4</td> <td>91.2</td> <td>82.3</td> <td>35.6</td> <td>75.1</td> </tr> <tr> <td>Facebook Messenger</td> <td>8.0</td> <td>61</td> <td>49.4</td> <td>9.8</td> <td>43.1</td> </tr> <tr> <td>Zoom</td> <td>68.7</td> <td>40</td> <td>17.4</td> <td>4.1</td> <td>26.1</td> </tr> <tr> <td>Instagram</td> <td>7.3</td> <td>56.1</td> <td>26.3</td> <td>0.7</td> <td>26.0</td> </tr> <tr> <td>None</td> <td>8.3</td> <td>4.9</td> <td>17.1</td> <td>64.0</td> <td>17.2</td> </tr> <tr> <td>Google Meet</td> <td>35.2</td> <td>21.6</td> <td>7.0</td> <td>0.1</td> <td>12.1</td> </tr> <tr> <td>Microsoft Teams</td> <td>25.7</td> <td>20.2</td> <td>8.4</td> <td>0.5</td> <td>11.7</td> </tr> <tr> <td>Facetime</td> <td>1.7</td> <td>9.6</td> <td>6.1</td> <td>1.0</td> <td>5.7</td> </tr> <tr> <td>Other</td> <td>7.1</td> <td>9.2</td> <td>3.5</td> <td>1.2</td> <td>4.5</td> </tr> <tr> <td>iMessaging</td> <td>0.7</td> <td>5.7</td> <td>5.2</td> <td>0.8</td> <td>4.4</td> </tr> <tr> <td>Telegram</td> <td>0.2</td> <td>5.6</td> <td>4.2</td> <td>0.1</td> <td>3.6</td> </tr> <tr> <td>Google Voice</td> <td>1.5</td> <td>5.6</td> <td>3.2</td> <td>0.5</td> <td>3.1</td> </tr> <tr> <td>Skype</td> <td>0.2</td> <td>1.8</td> <td>1.9</td> <td>0.5</td> <td>1.6</td> </tr> <tr> <td>WeChat</td> <td>0.2</td> <td>1.9</td> <td>0.9</td> <td>0.1</td> <td>0.9</td> </tr> <tr> <td>Discord</td> <td>0.3</td> <td>2.0</td> <td>0.3</td> <td>0</td> <td>0.5</td> </tr> <tr> <td>Signal</td> <td>0.1</td> <td>0.0</td> <td>0.3</td> <td>0.0</td> <td>0.2</td> </tr> <tr> <td>Bluejeans</td> <td>0.1</td> <td>0.1</td> <td>0.2</td> <td>0.0</td> <td>0.2</td> </tr> </tbody> </table> <p>It is also the case that consumers commonly subscribe, at no cost, to multiple apps (such as WhatsApp, Instagram, Messenger, etc.) that can all be active at the same time so that there is no need to “open the OTT software” prior to making or receiving a call. That is, when using a mobile</p>	OTT Services	Under 15	15-24	25-74	75+	Total	WhatsApp	39.4	91.2	82.3	35.6	75.1	Facebook Messenger	8.0	61	49.4	9.8	43.1	Zoom	68.7	40	17.4	4.1	26.1	Instagram	7.3	56.1	26.3	0.7	26.0	None	8.3	4.9	17.1	64.0	17.2	Google Meet	35.2	21.6	7.0	0.1	12.1	Microsoft Teams	25.7	20.2	8.4	0.5	11.7	Facetime	1.7	9.6	6.1	1.0	5.7	Other	7.1	9.2	3.5	1.2	4.5	iMessaging	0.7	5.7	5.2	0.8	4.4	Telegram	0.2	5.6	4.2	0.1	3.6	Google Voice	1.5	5.6	3.2	0.5	3.1	Skype	0.2	1.8	1.9	0.5	1.6	WeChat	0.2	1.9	0.9	0.1	0.9	Discord	0.3	2.0	0.3	0	0.5	Signal	0.1	0.0	0.3	0.0	0.2	Bluejeans	0.1	0.1	0.2	0.0	0.2		<p>proliferation of OTT applications domestically, similar product characteristics among OTTs allow consumers to consider switching between these services on a call-by-call basis.</p> <p>The Determination will be amended to reflect the ease of call generation and termination via OTT applications given the non-reliance of open software requirement.</p>
OTT Services	Under 15	15-24	25-74	75+	Total																																																																																																													
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Item	Section	Section Title	Stakeholder	Comments	Recommendations	TATT's Decision
		<p>traditional fixed and mobile services (i.e., non-interoperability between OTT applications).</p> <p>Further, while many common OTT apps (e.g. WhatsApp or FaceTime) only allow for intra-platform calls (i.e., a call can only be terminated on the same</p>		<p>phone as a “personal device” (which is generally always on anyway) consumers do not need to coordinate the type of app that they will use prior to making or receiving each call. The above would also apply to personal devices such as tablets, laptops and desktops, which have unfettered access to download various OTT applications onto their devices via their fixed networks. Thus facilitating the ability to access, make and/or receive voice/video calls from multiple OTT applications thus negating the interoperability/convenience of end-user experiences argument set out by the Authority.</p> <p>There is a clear dissonance regarding the Authority’s interpretation of how OTT apps are supposed to work as opposed to how OTT apps are actually accessed or utilized by end-users. The Authority’s analysis should reflect the latter.</p>		

Item	Section	Section Title	Stakeholder	Comments	Recommendations	TATT's Decision
		<p>application in which it was initiated), certain OTT services allow calls to fixed and mobile numbers (e.g. Skype or Viber). This represents one of the main challenges to demand-side substitution between OTT and traditional fixed calls.</p>				

Item	Section	Section Title	Stakeholder	Comments	Recommendations	TATT's Decision
		<p>To use OTT services, a consumer requires access to an active Internet connection and a personal device. These services further require the end user to turn on his/her device and open the OTT software to make a call. This is likely to result in a</p>				

Item	Section	Section Title	Stakeholder	Comments	Recommendations	TATT's Decision
		less convenient user experience with OTT services, compared to fixed telephony services.				
32	4.3.2	4.3.2 Supply-Side Substitution As was the case with the analysis of the substitutability between fixed and mobile services discussed earlier, the Authority is	Digicel	<p>Digicel disagrees with the Authority's assessment which seems to be based on a misunderstanding of the mechanisms used to supply OTT calls.</p> <p>While it is likely that an OTT provider would face high barriers in respect of deploying its own fixed network infrastructure and is unlikely to enter into wholesale service arrangements with a fixed service provider, neither is necessary in the context of current service delivery mechanisms for OTT voice calls.</p> <p>That is because, as their name suggests OTT services sit on top of and operate independently to</p>	<p>Digicel recommends the Authority gives further consideration to the substitutability of OTT voice services and undertakes further analysis/assessments to understand how consumers make calls via their fixed network connections.</p> <p>Any such analysis/assessments should take into</p>	<p>The Authority thanks Digicel for its comments on the high uptake and substitutability of OTT voice services with fixed telephony services, although the Authority does not agree with Digicel's position.</p> <p>The Authority has considered the high level of uptake of OTT voice services reported in its 2021 Digital Inclusion Survey (DIS 2021). Similarly, the TATT-KCL Fixed Customer Survey also reported high uptake and diffusion of OTT applications in the domestic market. Figure 12 on the uses of fixed broadband Internet service shows that 62.9% of respondents reported that they used the Internet for making calls (telephoning over the Internet/VoIP). This increased to 72.6% in Figure 53, where respondents were asked to select which third-party OTT applications they use on a computer – desktop, laptop, or tablet</p>

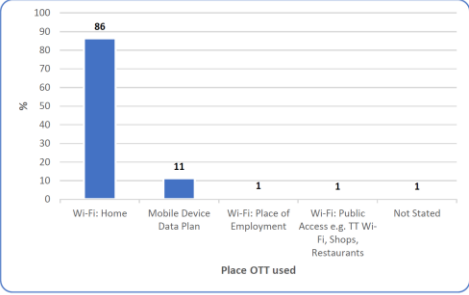
Item	Section	Section Title	Stakeholder	Comments	Recommendations	TATT's Decision
		of the preliminary view that there is no supply-side substitution between OTT and domestic fixed voice services in Trinidad and Tobago. This is due to the high barriers to entry to the fixed services market, in terms of the need to deploy fixed network infrastructure and		<p>the underlying network with access being made through computers, tablets or mobile telephones.</p> <p>Importantly, none of these devices needs to be physically connected to the fixed network and can operate through a WiFi connection. This makes OTT calling a practical and convenient substitute for fixed network calls that are made through a traditional handset.</p> <p>Digicel is therefore concerned that the use of mobile phones connected to a fixed service via WiFi, which is likely to be highly relevant in respect of making calls via OTT apps, appears to have been entirely (and deliberately) ignored by the Authority in respect of substitutability for fixed calls. This is made clear by the approach taken in the TATT-KCL Fixed Customer Survey 2022 which only considers “computer: desktop, laptop, or tablet without a SIM card” as devices for accessing fixed services.</p> <p>In Digicel’s opinion, such a limited approach distorts the findings of the survey and creates an inappropriate bias in the survey outcomes and conclusions.</p>	account the findings in DIS 2021.	<p>without a SIM card. Furthermore, the majority of respondents stated that WhatsApp was the most used application. This result falls within a 10% interval of the DIS 2021 result and is also consistent with the modal OTT application used.</p> <p>The TATT-KCL Fixed Customer Survey’s Figure 56, addressing the frequency of use of OTT third-party applications, illustrated that 84.2% of respondents admitted to using OTT applications several times a day, which also illustrates parallel and consistent results among the Authority’s market reports and customer surveys. This indicates that the Determination captures the significant adoption of OTT application in the domestic fixed broadband market and is not diametrically opposing but, suggests complementarity between fixed voice service subscription and fixed broadband services.</p> <p>Furthermore, the Determination indicates a complementary relationship between OTTs and fixed voice services at the level of access or subscription as customers are not giving up their fixed voice plan entirely (foregoing access to their fixed voice plan or subscription) and, would continue to use their fixed voice service (albeit to a lesser degree), but a small proportion of customers would substitute their fixed voice service on a per call or usage basis to OTT voice, video or messaging services.</p>

Item	Section	Section Title	Stakeholder	Comments	Recommendations	TATT's Decision
		<p>develop a retail distribution network.</p> <p>From the supply-side perspective, the technology used to deliver OTT call services and fixed calls are different. In particular, an OTT provider would not be able to switch and provide domestic</p>		<p>Digicel is also surprised at the Authority's apparent view that an OTT service provider would face difficulties in respect of being able to "develop a retail distribution network" as such a view would be at odds with the reality where OTT service providers have, through the Internet, arguably developed the most extensive and lowest cost retail distribution network available to any service supplier. The success of that network is borne out in the take up of such services. For example, WhatsApp, which is understood to be the most popular OTT app in Trinidad and Tobago is now also the most popular mobile messaging app worldwide and continues to grow strongly. As noted by Statista²:</p> <p>"The number of global unique WhatsApp users increased by 26 percent from the beginning of 2020 to mid-2023 and is estimated to have reached 2.79 billion unique users by June 2023. In June 2023, WhatsApp was the most downloaded chat and messaging app worldwide, amassing approximately 45.85 million downloads across the Apple App Store and the Google Play Store".</p>		<p>Regarding survey bias and procedural accuracy, Digicel is also advised that the TATT-KCL Fixed Customer Survey sample, of size 1000, satisfied and exceeded the thresholds considered appropriate for population sizes of 1,000,000 and above, at the margin of error of 5%. The TATT-KCL Fixed Customer Survey, sample represented 0.073% of the population and spanned 585 enumeration districts, 14 municipalities in Trinidad, and seven parishes in Tobago, ensuring the sample's representativeness across the national terrain and various demographics. Furthermore, the sample size of 1000 takes into account the universally established standard, 95 percent confidence level. The precision level, of 5% for the relative margin of error, is also well within the UN statistical recommended rate of 5-10 percent relative errors for main indicators, and notably below, the 12-15 percent relative margin of error, suggested maxima (UN, 2005). As a result, the TATT-KCL Fixed Customer Survey sample is substantially larger than the 400-threshold value, asserted for populations exceeding 100,000, by published statistical tables, at the 95 percent confidence level (International Journal of Economics, 2014).</p>

² See <https://www.statista.com/topics/2018/whatsapp/#topicOverview>

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		fixed call services in the short term, since it would need to develop its own network or buy the wholesale services of a fixed service provider.		<p>Importantly, WhatsApp is only one of many OTT apps that are available to consumers, with other alternatives including Instagram, Messenger, FaceTime, Skype, Viber and productivity apps such as Zoom and Teams to name a few.</p> <p>The proliferation of OTT apps and the statistics cited above do not indicate any retail distribution problem, with the high level of penetration and continuing growth being consistent with the Authority's acknowledgement at section 4.3.3 of the Draft Determination that:</p> <p>“The proliferation or adoption of OTT applications in the domestic fixed voice market is notable. The 2018 TATT-CMR Survey revealed that OTT services adoption approximated 132 of 1000 respondents or 10% of the population, whereas, the present TATT-KCL customer survey 2022 has reported an adoption rate of 63% of fixed internet subscribers. This represents a major increase in OTT service adoption and supports increased actual usage of OTTs” [emphasis added].</p>		

Item	Section	Section Title	Stakeholder	Comments	Recommendations	TATT's Decision
				<p>The Authority's downplaying of the significance of the impact of OTT services is also at odds with the market research undertaken by the Authority in connection with its Consultative Document "Framework on Over-The-Top Services (OTTs) in Trinidad and Tobago," which was released on 25th August, 2023. At page 12 of that Consultative Document the Authority stated:</p> <p>"From a purely demand-side perspective, the National Digital Inclusion Survey 2021 (DIS 2021) showed that a significantly high proportion of the local population (83%) reported that they used OTTs. For persons using OTTs, 79% access the services on a daily basis. The median time in minutes spent calling and messaging using OTT applications generally, and on Wi-Fi specifically, were 30 and 45 minutes, respectively. According to DIS 2021, the highest reported advantage of OTTs compared to mobile and SMS was better quality of connection particularly through a Wi-Fi connection, perceived by the respondents. These figures in DIS 2021 show the growth in demand and use of OTTs in Trinidad and Tobago, as well as the need for an orderly and structured approach to market expansion".</p>		

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				<p>The importance and frequency of the use of OTT voice services from a fixed service is further illustrated in the following statement and diagram taken from page 89 of DIS 2021.</p> <p>“For persons using OTTs, 79% access the services on a daily basis. The median time in minutes spent calling and messaging using OTT applications generally, and on Wi-Fi specifically, were 30 and 45 minutes, respectively.”</p>  <table border="1" data-bbox="763 841 1231 1133"> <caption>Figure 4.34: Locations OTTs are most used</caption> <thead> <tr> <th>Place OTT used</th> <th>Percentage (%)</th> </tr> </thead> <tbody> <tr> <td>Wi-Fi: Home</td> <td>86</td> </tr> <tr> <td>Mobile Device Data Plan</td> <td>11</td> </tr> <tr> <td>Wi-Fi: Place of Employment</td> <td>1</td> </tr> <tr> <td>Wi-Fi: Public Access e.g. TT Wi-Fi, Shops, Restaurants</td> <td>1</td> </tr> <tr> <td>Not Stated</td> <td>1</td> </tr> </tbody> </table> <p>Figure 4.34: Locations OTTs are most used</p>	Place OTT used	Percentage (%)	Wi-Fi: Home	86	Mobile Device Data Plan	11	Wi-Fi: Place of Employment	1	Wi-Fi: Public Access e.g. TT Wi-Fi, Shops, Restaurants	1	Not Stated	1		
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33	4.3.3	4.3.3 Preliminary Conclusions	Digicel	For the reasons stated above, Digicel disagrees with the Authority's preliminary conclusion that OTT voice services do not form a part of the same product market as fixed voice services.	Digicel recommends that the Authority consider defining a separate market for voice calls made from	The Authority gives due regard to Digicel's comments on the separation of fixed access from voice call service and the timeline proposed within the Determination for reviewing the market boundaries.												

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				<p>Moreover, the substitutability and impact of OTT voice services on fixed voices services calls into question the Authority's preliminary conclusion that voice calls sit within the markets for "Domestic fixed telephony services (fixed line rental and fixed calls)" and "Multiplay bundles (2P/3P/4P+) which includes fixed telephony and/or fixed broadband services".</p> <p>Instead, and consistent with the Authority's Fixed Market Definition 2009, Digicel considers voice calls made from a fixed access connection should be considered to be in a distinctly separate market from "access" or "line rental" services.</p> <p>Digicel also disagrees that the Authority should wait a further three years to review the Fixed Voice Market Definition to take into account evolving trends in OTT applications. This is for two reasons.</p> <p>Firstly, Digicel is of the view that there is already sufficient evidence to support a conclusion that OTT voice services should be included in the Fixed Voice Market Definition.</p>	<p>a fixed access connection.</p> <p>Digicel further recommends OTT voice services should be included in that separate market for voice calls made from a fixed access connection.</p>	<p>The Determination acknowledges the proliferation of OTT voice services domestically. The TATT-KCL Fixed Customer Survey reveals that "there is a high proportion of survey respondents subscribed to standalone broadband services that mostly use their broadband connection for managed VoIP and OTT calls".</p> <p>The Determination reports the major increase in OTT service adoption, from 10% to 63% within the three-year period, which supports increased actual usage of OTTs. Furthermore, the Determination also states, in section 4.3.3. Preliminary Conclusions, that the demand for OTT services by consumers in Trinidad and Tobago is likely to increase in the future. The Determination thereby encompasses the rapidly evolving rate of technological change and has taken this into account.</p> <p>Fixed access is used by a sizable portion of the population. Demand for a fixed service typically involves joint consumption of both access and call services. The TATT-KCL Fixed Customer Survey reveals, in Figure 16, that 62% of customers spend between TT\$100 and TT\$599 (24.6%: TT\$100—TT\$199; 21.7%: TT\$200—TT\$299; and 15.7%: TT\$400—TT\$599). These price points are considerably beyond the subscription requirement for standalone fixed line access and therefore indicate demand for both access and call services.</p>

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				<p>Secondly, the most recent data being relied upon by the Authority (TATT-KCL Fixed Customer Survey 2022) shows that OTT services adoption has increased more than six-fold from 2018 to 2022 is itself already a year old. Given this clear pace of change, proposing to wait until at least 2026 to conduct a further review seems to be excessive in the circumstances.</p>		<p>It is noteworthy that, although the majority of respondents (75.7%) reported that they used their fixed landline service to receive calls, this was not the only purposes identified; making local and international calls were second- and third-ranked uses of fixed landline services respectively, albeit significantly less frequently.</p> <p>The TATT-KCL Fixed Customer Survey also indicates that 94% of the relevant group of respondents made outbound fixed calls on a weekly basis.</p> <p>Notwithstanding the Authority acknowledges that declining fixed voice traffic and increasing offers of fixed line access with a free call component observed, does indicate declining trend in fixed call component. The market may, therefore, be trending in the direction of a distinct market. However, the Authority considers that the significant level of tariff subscriptions, a high level of service heterogeneity, a significant level of traditional or basic standalone fixed voice consumption, primarily constant and declining fixed voice tariffs and the SSNIP evidence, support the existence of the fixed access and fixed voice are part of a relevant market with mobile voice service. The absence of this relevant product/service market (fixed access, fixed voice and mobile voice) would be at odds with the SSNIP principles of market definition of identifying the smallest relevant consumer group and the nuances of the local market at this time.</p>

Item	Section	Section Title	Stakeholder	Comments	Recommendations	TATT's Decision
						<p>The Authority gives consideration to the widespread proliferation of OTTs applications in the local market, and notes the potential for demand-side substitution (albeit limited) at this time.</p> <p>Although consumers were not observed to be relinquishing services completely, substitution may occur on a call basis and is likely for a small percentage of customers in the event of a SSNIP (recall TATT-KCL Fixed Customer Survey Table 1 and Table 9). Therefore, OTT call services were considered only partial or limited substitutes. This clarification is made more explicitly in the Determination.</p> <p>The Authority also notes the degree of pricing restraint placed on fixed voice tariffs by OTT applications, as “operators try to match and compete with unlimited access to VoIP minutes”. They sustain flat rate tariffs and /all offer zero- rated tariff structures.</p> <p>This pricing consideration is essential to an assessment of dominance, as outlined in sections 29 (8) of the Act. However, such consideration does not fall within the scope of the Determination of market definition.</p> <p>A detailed assessment of the competitive factors including but not limited to pricing restraint of substitutes, service heterogeneity, market shares technological advancement, economies of scope and scale, and relevant barriers will be</p>

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						analysed (where applicable) in the Authority's Determination of Dominance in the Domestic Fixed Telephony and Fixed Broadband Markets.
34	5	Closing Comments	CCTL	We note the intention of the Authority is to revisit the market definition in another three years. Given the urgent challenges facing the industry, we encourage the Authority to use this opportunity to appropriately define market boundaries, as a starting point for addressing the regulatory imbalances and resulting market harm that could retard the robust and sustained development of the industry.		<p>The Authority appreciates CCTL's feedback on the need to appropriately define market boundaries as a "starting point" for addressing regulatory issues impacting the development of the industry.</p> <p>The Authority has deployed industry best practices, such as the HMT or SSNIP test, in addition to utilising qualitative market definition determinants including product characteristics, uptake and usage trends, relative prices and supply-side substitutability. The Authority has observed the impact of OTT applications on the domestic market, and considers it to be non-trivial and significant. The Authority notes that the uptake of OTTs is strong, with the majority of the market using OTT applications multiple times daily. Figure 56, on the frequency of use of OTT third-party applications, in the TATT-KCL Fixed Customer Survey, shows that 84.2% of OTT application users used the service "several times a day". It is worth noting that "access to OTT applications" was the most popular use of fixed broadband services and therefore it may be considered as an asset to fixed broadband networks. In Table 12, on the ranking of uses of fixed broadband Internet service, the TATT-KCL Fixed Customer</p>

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						<p>Survey reports that 62.9% of respondents used the Internet for making VoIP calls.</p> <p>Therefore, considering all the information and data captured within the domestic market, including the evidence of customers switching based on the SSNIP (premised on TATT-KCL Fixed Customer Survey Table 1, Table 3, Table 13 and Table 18 et al.), relative prices (outlined in section 3.2.1.3, section 4.1.1.3, and section 4.2.1.3 et al of the Determination), uptake and usage trends (illustrated in section 3.2.1.3, section 3.3.1.2, and section 4.3.1.2 of the Determination), the evaluation of services in the markets (discussed in section 2.1, section 3.1.1., section 3.2.1.1, section 3.3.1.1, section 4.1.1.1 and section 4.3.1.1 of the Determination), and other quantitative and qualitative data (derived from the following sources, TATT-KCL Fixed Customer Survey, Operators' Qualitative Data, Forms Operators' Quantitative Data Templates, Price Trends and Market Data), the Authority considers three distinct markets:</p> <ol style="list-style-type: none"> 1. A market for standalone fixed telephony services (fixed line rental and fixed calls) and mobile voice services 2. A market for standalone fixed broadband services 3. A market for multi-play bundles (2P/3P/4P+) which includes fixed telephony and/or fixed broadband services identified in the Determination to be appropriately defined and forward looking based on the information available.

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						The Authority's revised position, which includes mobile voice services as a part of the relevant domestic retail fixed voice market definition, was arrived at in light of the significant partial substitution observed (i.e., the reduction in consumption of fixed voice services and the related increase in the consumption of mobile voice service on a calls basis, as an alternative), which may constrain an HM from profitably increasing the price of fixed voice and messaging services. This revision takes into consideration additional operator metrics (including, significant customer switching on a calls or usage basis, constant service tariffs and declining financial earnings) and international best practices. Specifically, the Authority notes the revised European Commission Notice on the definition of the relevant market for the purposes of EU competition law, which permits taking into account usage metrics (partial substitution) and does not require the exclusive use of perfect substitution (access metrics) for market definitions.
35	5	Preliminary Conclusion	Digicel	Consistent with its views above, Digicel disagrees with the Authority's preliminary conclusion in respect of the relevant market definition(s).	Digicel recommends that it would be appropriate to determine four national markets defined as follows:	The Authority notes Digicel's recommendation of four national markets to be defined and respectfully disagrees with the operator, for the reasons outlined in sections 1 and 5 of the Determination. Specifically, in respect of Digicel's fourth market boundary, the Authority notes the existence and ease of supply-side substitutability between fixed line and fixed voice services,

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					<ol style="list-style-type: none"> <li data-bbox="1381 310 1704 472">1. A market for standalone fixed telephony access services <li data-bbox="1381 521 1704 683">2. A market for standalone fixed broadband services <li data-bbox="1381 732 1704 1057">3. A market for multi-play bundles (2P/3P/4P+) which includes fixed telephony access and/or fixed broadband services <li data-bbox="1381 1105 1704 1406">4. A market for fixed domestic retail voice services which includes publicly available local and/or national retail telephone services 	<p data-bbox="1704 310 2558 764">technology and widespread joint demand for the use and uptake of fixed line and call services. This suggests the existence of joint use of fixed line and call services or complementarity between these services, which negates the existence of distinct markets for fixed line access and call service. Thus, the Authority considers that the three distinct markets identified in the Determination are sufficient for the domestic retail fixed telephony and fixed broadband markets, and are appropriately defined and forward looking based on the information available, with no requirement for expansion or contraction at this time.</p> <p data-bbox="1704 764 2558 1406">In keeping with international best practices, by taking into account the dynamism of communication services, shifts in consumption patterns in the post-pandemic era, and evolving trends in OTT applications, the Authority will review this Determination within the next three-to-five years.</p>

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					provided at a fixed location (regardless of the technology used to provide the service and which, for the avoidance of doubt, includes voice services provided via an OTT service).	