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Business-to-Business e-marketplaces constitute one of the most important developments of the ‘new economy’. They are also an interesting case study for the attempts of competition authorities to find a response to contractual agreements that, in the view of industry itself, offer the potential to revolutionise purchasing and supply-chain management. This paper shortly reviews the commercial developments in the field of e-marketplaces and the history of the regulatory response to them so far. It then proceeds to an in-depth discussion of the competition issues raised by e-marketplaces.

Business-to-Business (B2B) e-marketplaces are software systems that allow industrial buyers and sellers to transact business online over the Internet through a central node. Their development in Europe can be traced back to 1996, when British Telecom established a Private Digital Exchange known as BT Trading Places. It did, however, not work successfully and was withdrawn. E-marketplaces were more widely developed from 1998 onwards. Since then, the number of such markets has exploded. In 2000 UBS Warburg estimated that 200 marketplaces were active in Europe, in 2001 Jupiter MMXI, a research company, estimated this number as more than 500. While only 0.5 to 1.5 per cent of all business-to-business transactions are currently conducted through these exchanges, this number is generally expected to increase sharply.

There are four general market types under which there are many variations:

- Buyer-Managed Exchanges: These are markets which are set up by large buyers, often in conjunction with technology partners. An example would be the Covisint joint venture between General Motors, Ford, DaimlerChrysler, Renault, Nissan, Oracle and i2.

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* Administrator, European Commission, Competition Directorate-General. All views expressed are personal and do not necessarily reflect those of the European Commission.


3 http://uk.jupitermmxi.com/press/releases/20010212.jsp (last visited on 20.07.01).

4 ibid. See also UBS Warburg, n 2 above, 3.

5 UBS Warburg predicted that in 2005 16 per cent of all B2B transactions in Europe would be conducted through exchanges, ibid, 3. Goldman Sachs expected this number to be 13 per cent, see Goldman Sachs, The Old World meets the New Economy: B2B in Europe - Book 2 (London, 2000) 52. In the longer term, penetration rates are projected to be much higher.
• Supplier-Managed Exchanges: These markets are being set up by suppliers, such as UTC, Honeywell, and their technology partner i2, who developed a marketplace for aerospace equipment (MyAircraft.com).  

• Market Makers: These are independent exchanges not controlled by buyers or sellers. They tend to be backed by venture capital and often were early innovators. Examples would be auction houses such as Freemarkets.

• Content Aggregators: Content aggregators are sites that build and maintain multi-vendor catalogues which allow customers to access the offerings of several suppliers using a common search structure.

Another useful categorisation can be built upon the scope of an exchange and its position in the value chain. Horizontal exchanges offer uniform, non-strategic products across multiple industries. Examples would be the maintenance, repair, and operations (MRO) exchange Grainger.com or the office supplies provider Staples.com. Vertical marketplaces, on the other hand, concentrate typically on one industry and try to offer all the inputs, strategic and non-strategic, that are required to operate in this industry. Examples would be Covisint for the automotive industry or Rubbenetwork for the tyre industry. There are, however, also multi-industry vertical marketplaces which seek to create trading communities in several industries. An example would be Freemarkets.

B2B electronic markets are generally considered as a potential source of significant efficiency gains. They generate efficiencies in three ways. First, they put a downward pressure on purchasing prices. Secondly, they decrease informational costs and expand everyone’s market reach by removing the geographic barriers to buyers and sellers efficiently discovering each other. Thirdly, they allow a reduction in transaction costs and an improvement of inventory management. Estimates about the size of these gains vary. UBS Warburg, for example, predicted cost savings from B2B electronic markets of 7 per cent of turnover on average.

Regulatory Responses

Regulators have taken note of the existence of e-marketplaces fairly early. Already in June 2000 the US Federal Trade Commission (FTC) conducted an explanatory workshop to examine competition issues in B2B electronic marketplaces. As a result, the FTC published a staff report in October 2000. The Office of Fair Trading (OFT) ordered a study on ‘E-Commerce and Its Implications for Competition Policy’, which it published in August 2000. The OECD held a ‘Mini-Roundtable on Electronic Commerce’ in October 2000 with written contributions from competition authorities

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6 This exchange has since merged with the buyer-managed exchange AirNewCo to form Cordiem.com.


8 UBS Warburg, n 2 above, 4.


10 Office of Fair Trading, E-Commerce and Its Implications for Competition Policy, prepared by Frontier Economics (2000, OFT Report 308).
of 10 jurisdictions.\textsuperscript{11} The European Commission, finally, has so far followed a twin-track approach. On the one hand, it has begun to develop and publicise the principles for the assessment of e-marketplaces in a series of conferences.\textsuperscript{12} On the other hand, it has increasingly gained practical experience through a number of notifications, both under Article 81 and the European Community Merger Regulation (ECMR).\textsuperscript{13}

As a result of this public debate, one can identify a common ground of issues which competition authorities across the world consider as important when analysing B2B e-marketplaces. As we will see later, these issues also feed into some form of implicit ‘guidelines’ which industry seems to follow when setting up exchanges in order to pre-empt possible competition concerns and often even the need for a notification.

**Legal Basis for an Assessment under EC Law**

B2B e-marketplace may fall under European Community (EC) competition law for two reasons: First, the creation of an exchange may constitute a concentration under the ECMR\textsuperscript{14}. Secondly, the agreement to create and/or operate an exchange may be restrictive of competition in the sense of Article 81 ECT. A B2B e-marketplace will constitute a concentration if the conditions of Articles 1 and 3 ECMR are fulfilled.\textsuperscript{15}

This is often the case for B2B e-marketplaces that are set up by a small number of large industrial companies which jointly create and control an electronic market. Article 81 ECT would, on the other hand, be potentially applicable if a larger number of companies set up an exchange with no shareholder holding individually or jointly with other shareholders a controlling stake.

**Market Definition**

The definition of the relevant antitrust market is the starting point for almost all antitrust examinations. In many cases, the outcome of the market definition process also determines the outcome of the assessment. The Commission has described the principles of market definition in a Notice.\textsuperscript{16} These principles remain valid and are fully applicable to B2B electronic markets. Their application may, however, become more difficult due to the lack of reliable sales and price data and the current speed of


\textsuperscript{13} Until 31 July 2001, the Commission had cleared 9 concentrations involving the creation of a B2B e-marketplace and had issued a comfort letter under Regulation 17 in two cases.


\textsuperscript{15} Article 1 ECMR sets the turnover thresholds which are used to define the concept of ‘community dimension’. This concept is employed to divide competence between Member States and the Commission in the field of merger control. Article 3 defines the notion of a ‘concentration’. In the case of e-marketplaces, such a concentration will normally arise if the marketplace is an autonomous full-function joint venture as defined in Article 3(2) ECMR.

change in e-commerce markets in general. The definition of the relevant product market will in particular raise two sets of questions:

Firstly, the question whether electronic marketplaces compete with ‘normal’ bilateral sales or whether they constitute a separate, narrower product market. The former would be likely if the parties used electronic marketplaces only as an additional sales channel, the latter if the exchange offered additional services which clearly differentiated it from other sales forms.

These questions were discussed in the Commission’s clearance decision of MyAircraft, a B2B exchange for aircraft parts and services. In this case, the Commission investigated the question whether this online exchange was part of the wider market for airline equipment or whether it constituted part of a narrower market for exchanges (exchanges for airline equipment).

The Commission’s market investigation revealed that industry participants in general considered the B2B e-marketplace as one segment among the many modalities by which companies transact business. The exchange would increase the efficiency of communications between aerospace industry participants without changing the way transactions are conducted in the aerospace industry.

The Commission also considered whether specific services offered by the exchange constituted product markets in their own right. In this case, the services offered by MyAircraft.com to its customers included supply chain management tools and e-procurement. To a large extent these services were considered to be an integral part of the services offered by MyAircraft.com in order to enable customers of the site to use MyAircraft.com as a purchasing or selling tool. However, some elements of the supply chain management service were regarded as going beyond what is normally required by a user of MyAircraft.com in order to use this site to make business. This would in particular be the case for the inventory planning tools and forecasting tools. The market investigation revealed, however, that a majority of third parties considered that these services would be distinct components that may be offered separately.

The results of the investigation seemed to suggest that the B2B electronic marketplace constitutes part of a wider market. It should be noted, however, that in this case the precise relevant product market definition was left open since, irrespective of the market definition chosen, the proposed concentration did not give rise to the creation or strengthening of a dominant position. For the future, many industry observers predict that transactions in B2B e-marketplaces will replace other ways of doing business and become the prevalent form of B2B transactions.

A second question which might arise when defining the relevant product market is whether or not distinctions can be drawn between different B2B e-marketplaces based on their industry focus. A currently open question concerns in particular the degree of substitution between vertical exchanges, which are set up to cater to a given industry, but which may be open to outside buyers, and horizontal exchanges, which cut across industries but only offer certain goods or services. An example would be a car producer that needed MRO goods. It could turn either to a vertical exchange, such as Covisint, a horizontal exchange, such as Grainger. com, or to an auction house, such

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17 See Office of Fair Trading, n 9 above, 37.

18 Case M. 1969 – UTC/Honeywell/i2/MyAircraft.com, Article 6(1)b-decision of 04.08.2000.
as Freemarkets. For other, more car-specific goods, its choice might be more limited, as there may not be a horizontal exchange or as the good may not lend itself to an auction. This suggests that the demand side might be faced with a continuum of choices, depending on the number and nature of B2B e-marketplaces that allow trading in a specific good. Again, one should note that the Commission’s decisional practice has so far not addressed this issue, as the marketplaces analysed so far did not create competition problems irrespective of the market definition adopted.

When looking at the definition of the relevant geographic market, the relevant question is likely to be whether the geographic market will be widened, as location becomes less important for the interaction between buyers and sellers. One can expect that such a widening of the geographic market will indeed be brought about by many B2B electronic marketplaces.

**Competition Issues**

Once the relevant market is defined, one can turn to the competition issues which B2B e-marketplaces potentially raise. Here, a distinction can be made between issues relating to co-ordination effects which could be brought about by an exchange and issues relating to market dominance and foreclosure.

**Co-ordination Effects**

The likelihood of co-ordination effects has been one of the most discussed features of B2B exchanges. The problem arises as B2B electronic marketplaces not only increase the transparency in the market but also facilitate the exchange of sensitive information between competitors. For competition policy, such an information exchange is of concern as communication is central to collusion.19

A problem of information sharing is created if some or all buyers or sellers can use an electronic market in order to discover or to exchange sensitive information on prices and quantities. This concern is linked to the design of the system, in particular its openness in terms of individual data originating with other parties.

When analysing this concern, a distinction can be made whether or not information is exchanged between all market participants or only between a sub-group of the market, in particular the owners.

Whether or not information sharing between all market participants creates a competition problem depends very much on the nature of the market. In EC competition law the exchange of sensitive and detailed information might as such be caught by Article 81(1) ECT if it takes place on an oligopolistic market. The judgements of the European Courts in the Tractor cases20 and the Steel Beams cases21 provide useful clarification in this respect.

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It emanates from these judgements that in addition to the market structure the following elements need to be taken into account when assessing the potential impact of information sharing: the type of information exchanged, in particular the level of aggregation, the age of the information exchanged, and the frequency of information exchange.

B2B electronic marketplaces are thus less likely to raise concerns if they only provide summary statistics (e.g. on trade volumes) to all market participants while individual data is only accessible to the owner of such data. Similarly, competition concerns are reduced when the system only allows access to historical data. In the example of an auction market, this could for instance be done by only showing the leading bid without revealing the identity of the bidder and by not specifying the order of other bids.

Enforcement practice shows that marketplace operators are well aware of the need to ensure data protection and to impede improper information exchanges. They are therefore setting up ‘firewalls’ and use other technical means that ensure that data flows are limited to the necessary and that they can be controlled. Antitrust agencies will in turn need to provide or acquire the technical expertise that enables them to judge whether or not these safeguards are sufficient.

A different concern is raised if only a few market participants have access to certain information. This problem may exist in particular where an online marketplace is controlled by a number of market participants. These owner-participants could then receive privileged information about transactions in the market, which would create competition problems that relate to both information sharing and discrimination.

This issue has been addressed in the Volbroker case, the first B2B exchange cleared under Article 81. In this case, six major banks set up a joint venture offering an electronic brokerage service for trading foreign currency options. The case raised concerns regarding the access to confidential information by the parent companies. To deal with this concern, the owners of the Volbroker.com exchange gave the following assurances to the Commission:

None of Volbroker.com's staff or management will have any contractual or other obligation towards any of the Parents and vice versa.

Volbroker.com's staff and management will be in a geographically distinct location from that of the parents.

The representatives of the Parents on Volbroker.com's Board of Directors will not have access to commercially sensitive information relating to each other or to third parties.

The Parents will not have access to the information technology and communication systems of Volbroker.com.

The Parents will also ensure that the staff and management of all the parties understand and appreciate the importance of maintaining the confidentiality of sensitive commercial information and that sanctions for breach are spelled out.\footnote{‘Commission approves the Volbroker.com electronic brokerage joint venture between six major banks’, Commission Press Release IP/00/896 of 31 July 2000.}
To alleviate further concerns related to market access, the parent companies also agreed to allow so-called voice brokers to participate in Volbroker.com where they are acting as principals.

The undertaking thus aims at building ‘Chinese walls’ between the joint venture operating the exchange and the parent companies which are active as market participants. While such a separation can certainly be regarded as a necessary condition to ensure that the marketplace is operated with sufficient independence from the parents, it remains to be seen whether it is also a sufficient condition. Undertakings involving ‘Chinese walls’ are difficult to monitor for a competition authority. While they might be appropriate for financial services industries which are long used to such provisions and which have established a certain “compliance culture” based on the financial markets rules, such undertakings may not always be sufficient for other industries or market situations.

A second problem regarding possible co-ordination in electronic markets relates to the question whether market participants can effectively bundle purchasing or selling volumes. This question is in principle not different from ‘normal’ joint purchasing or joint commercialisation. Therefore, the discussion of these questions in the recently adopted ‘Guidelines on the applicability of Article 81 ECT to horizontal co-operation agreements’ constitutes a good starting point for the assessment under EC law. It is notable in this respect that these Guidelines propose a safe haven of 15 per cent market share below which a purchasing or commercialisation agreement would be assumed either not to restrict competition or to fulfil the conditions for an exemption. These safe havens would also apply to horizontal agreements involving e-commerce. Thus, joint purchasing in an exchange by companies whose combined market share is below 15 per cent on both the purchasing and the selling market would not breach Article 81(1).

Many B2B electronic markets are, however, addressing the possible competition problems of horizontal co-operation not by reference to market shares but by only allowing joint purchasing or commercialisation of accessory or MRO products. An exchange for the widget industry would for instance only provide for joint purchasing of office supplies while the widgets themselves would be bought individually by the member of the exchanges.

This would not necessarily bring the joint buying activities within the boundaries of the safe haven provided by the Guidelines. Collectively, the producers of widgets are unlikely to have a market share larger than 15 per cent in the buying market for office supplies. However, their market share on the selling market for widgets may be larger than 15 per cent. They would therefore not fulfil the conditions of the safe haven.

It must nevertheless be acknowledged that such a set-up would reduce the risk of collusion significantly. An individual assessment would therefore probably lead to the result that Article 81(1) is not infringed. This becomes very clear from the discussion in the horizontal guidelines.

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23 Guidelines on the applicability of Article 81 of the Treaty to horizontal co-operation agreements (OJ C 3, 06.01.2001, p.2), paras. 130 and 149.
The guidelines make clear that joint purchasing can be a problem for two reasons: (a) because it creates buyer power, and (b) because it can lead to co-ordination on the downstream market.\(^{24}\)

If we assume that the market share of the widget producers in the buying market for office supplies is lower than 15 per cent, we can already conclude that buyer power is probably not a problem.

Competition problems on the downstream market could exist if the parties achieve a high communality of costs through joint purchasing.\(^{25}\) Office supplies, however, are unlikely to constitute a high proportion of the total costs of a widget producer. Therefore, the joint purchasing of these products is also unlikely to create competition problems on this front. The joint purchasing of office supplies would therefore most likely not pose a competition problem.

**Market Dominance and Foreclosure**

A second set of possible competition problems relates to issues of market dominance and foreclosure. They are in particular created through the network character which is inherent in B2B electronic marketplaces. Positive network externalities and potential problems of network dominance are present when the value of a system to the individual user increase with the number of users.\(^{26}\) They can lead to market ‘tipping’ and the creation of a dominant position if the network effects are strong enough to induce all market participants to use the same network. This problem could potentially arise in the context of B2B electronic marketplaces as the benefits will often increase with the number of buyers and suppliers which are linked to the same system.

The possible prevalence of network effects in B2B electronic markets creates a dilemma for competition policy. On the one hand, it needs to take account of the fact that a larger network can be the source of substantial efficiencies. The fact that exchanges try to sign up as many industry players as possible should therefore not be considered as a competition problem in itself. On the other hand, competition policy needs to acknowledge that network effects can lead to a ‘tipping’ effect which will substantially raise barriers to entry and expansion and which could create substantial market power for the owner-operator of the largest exchange.

The likelihood of such ‘tipping’ effects will depend on the value that buyers and sellers put on liquidity. Liquidity is in particular important for B2B electronic marketplaces which operate as true exchanges. Such exchanges are characterised by the interaction of many buyers and sellers and the dynamic setting of a market-clearing price. They therefore require a sufficient amount of liquidity to operate.\(^{27}\)

Most B2B electronic marketplaces, however, do not seem to constitute ‘exchanges’ in the sense of a commodity or stock exchange, as there is no trade in standardised

\(^{24}\) ibid, paras. 127-129.

\(^{25}\) ibid, para. 128.


\(^{27}\) L. Benzoni, ‘La Place de Marché est-elle proconcurrentielle?’ (2001) 121 Revue de la Concurrence et de la Consommation 7, 8.
products at a market price in an anonymous transaction using intermediaries. Most B2B electronic marketplaces are rather facilitating devices, which allow buyers and suppliers to engage directly in individual transactions. These transactions could take the form of an auction, a reverse auction or of a vendor catalogue. In all these cases, the critical success factor is not so much the volume of actual transactions, but rather the number of buyers and sellers, which are connected to the system, which actively monitor it and which could thus potentially make an offer.

Network dominance will be harder to achieve in such a context. Any operator trying to build a dominant position would need to base this attempt not only on a ‘tipping effect’, but would also need to create other lock-in mechanisms such as exclusivity provisions. Exclusivity provisions can interact with network effects and thus create substantial barriers to entry. For users willing to switch B2B exchanges the combination of network externalities and exclusivity provisions creates ‘…what can be a prohibitive opportunity cost of joining the new network: cutting themselves off from the larger, established network.’28 Lock-in could also be achieved where market participants are tied into the market via proprietary supply chain management systems.

Competition policy should therefore carefully assess the design of the market and any ancillary provisions to ensure that the owner-operator does not try to enhance any existing network effects by contractual or other means. Competition authorities should in particular generally not accept provisions which require the users of an electronic marketplace to purchase all its requirements of a certain good through an exchange. Minimum purchase requirements, expressed in absolute or percentage terms, or other contractual terms which indirectly seek to achieve the same goal should similarly be seen with suspicion.

Such requirements may, nevertheless, be acceptable during the start-up phase of a marketplace in order to provide a minimum level of liquidity. In the emaro case, a B2B electronic market for office furniture and equipment set up by Deutsche Bank and SAP, the Commission accepted that Deutsche Bank would contribute a minimum of 68 per cent to the joint purchases of both parent companies through the exchange. This clause was considered as directly related to and necessary for the setting-up of the market, provided its duration did not exceed exceed three years.29

So far, the Commission’s enforcement experience with B2B electronic markets has not revealed problems related to network effects and market dominance. This is due to the fact that in these cases several e-marketplaces competed heavily even in a narrowly defined market.30

In the future, a shake-out phase leading to a reduction in the number of marketplaces seems, however, unavoidable.31 This raises the question of the appropriate regulatory

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30 See e.g. the decisions in cases M. 1969 – UTC/Honeywell/i2/MyAircraft.com, Article 6(1)b-decision of 04.08.2000, M.2270 – Babcock Borsig/mg technologies/SAP Markets/Deutsche Bank/VA Tech/ec4ec, Article 6(1)b-decision of 22.01.01, M.2398 – Linde/Jungheimrich/JV, Article 6(1)b-decision of 25.04.2001.
31 Jupiter MMXI, a research company, predicts, for instance, that ‘fewer than 100 Net Markets will survive out of the 500 existing today’ (see http://uk.jupitermmxi.com/press/releases/20010212.jsp, last visited on 20.07.01).
response as regards access to the remaining marketplaces. Problems of foreclosure could arise if marketplaces, in particular those owned by industry participants, would exclude certain participants from the most efficient trading platform, thus putting them at a competitive disadvantage.

These problems could be addressed under Article 82 ECT, provided that an exchange occupies a dominant position and that it can be considered as an essential facility. In this case, an exchange would abuse its dominant position if it did not grant access, unless such refusal would be objectively justified. The test, set out by the European Court of Justice in the Oscar Bronner judgement, is however fairly strict. It requires that the refusal is likely to eliminate all competition in neighbouring markets; that access must be indispensable for the competitor to carry on its business in that there is no actual or potential substitute in existence to the facility; and that the refusal is incapable of being objectively justified. Application of the essential facilities doctrine would thus require not only that the exchange was dominant in relation to other exchanges but also the proof that conventional means of distribution are no longer a substitute to trading through an exchange.

While application of the essential facility doctrine to B2B electronic marketplaces thus remains an uncertain proposition, operators of these marketplaces may nevertheless find it in their interest to create a marketplace that is as open as possible. In most circumstances, this will make commercial sense and it will also help to refute any allegations relating to the possible abuse of a dominant position. Openness does however not require that an operator admits every interested party to a marketplace. The Commission decisions concerning a number of commodity exchanges suggest that admission standards would generally seem acceptable, provided that the standards are objectively necessary and are applied on a non-discriminatory basis.

**Best Practice ‘Guidelines’**

From the discussion above, one can deduce a number of rules that companies setting up e-marketplaces may want to follow to ensure that EC competition rules are not infringed. Elements of such ‘guidelines’ are:

- open, non-discriminatory access from all interested buyers and sellers;
- no provisions which directly or indirectly try to impose the exclusive use of the exchange by its participants;
- joint purchasing or commercialisation only within the boundaries set by the Commission’s horizontal guidelines;


34 Other commentators are, however, of the opinion that B2B e-marketplaces may quickly turn into essential facilities, see F. Stroud, ‘B2B E-Marketplaces – The Emerging Competition Law Issues’, (2001) World Competition 24(1), 125, 134.

structural separation between the exchange and its parents which is supported by ‘Chinese walls’;

credible data protection and safeguards against the exchange of information.

EC enforcement experience shows that many e-marketplaces seem to follow these principles. The press release issued on occasion of the Covisint clearance\textsuperscript{36} states for instance that ‘…the agreements show that Covisint is open to all firms in the industry on a non-discriminatory basis, is based on open standards, allows both shareholders and other users to participate in other B2B exchanges, does not allow joint purchasing between car manufacturers or for automotive-specific products, and provides for adequate data protection, including firewalls and security rules.’\textsuperscript{37}

Adherence to these ‘guidelines’ may also explain the relatively small number of notifications under Regulation 17/62. Most companies setting up e-marketplaces seem to assess themselves whether or not Article 81(1) is infringed and arrive at the conclusion that their agreement is not restrictive of competition. The Commission should generally welcome this development as it corresponds to its proposals for the future application of Article 81.\textsuperscript{38} It obviously has the option of examining any such non-notified agreement, either on its own initiative or following a complaint, if an e-marketplace threatens to create competition problems.

**Conclusion**

B2B e-marketplaces have generated a large degree of interest, both in the business world and the antitrust community. After more than one year of debate and decisional practice, it appears that the current competition rules are fully capable of dealing with this new phenomenon. As most emanations of the ‘new economy’ B2B e-marketplaces are not so unique that they can not be analysed within the existing framework.

\textsuperscript{36} This joint venture between General Motors, Ford, DaimlerChrysler, Renault, Nissan, Oracle and i2 was found to be not restrictive of competition. Accordingly, a negative clearance ‘comfort letter’ was issued by the Commission.
