

Global Internet Commerce: What market? What tax?

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Abstract.

Internet Commerce has four central distinguishing features that separate it from Old Commerce. The features are conducive to high risk profiles, tax evasion and market definition complexities that add new complications for analysis and policy makers. Economic analysis provides tools and insights to measure and interpret these complexities. If internet commerce finds the very rapid growth path once thought possible for it, these complications will become more important for public policy, as will be the task unravelling them. The paper seeks to shed light on these specific complexities of internet commerce and makes recommendations for action, both in relation to tax compliance and competition policy laws and enforcement.

Key Words: Internet Commerce; Market; Market Definition; Financial Risk; Tax Evasion.

JEL Codes: D81; H26; K21; L40; L51.

A. The Setting and the Issues

Global Internet Commerce (E-Commerce, or GIC, hereafter) is any transaction or potential transaction where globally-interconnected computer technology is involved significantly in the research for, execution or facilitation of commerce or business. E-Commerce was not significantly available until about 1990 and was expected to become the common form of business and consumer transactions by 2000. This was not the case. Fear of credit-card fraud was significant among the reasons for the surprisingly slow penetration of e-commerce.

Anticipating the dominance of GIC caused fear of widespread tax evasion and tax officials around the world commissioned studies in the 1990s to predict the magnitude of tax losses and assemble policy cures. Antitrust authorities became concerned that traditional definition of market would come under challenge through GIC. In both cases, the concerns subsided in the early 2000s. We argue here that any such apparent complacency about GIC is ill-advised.

I have appended some materials that document the evolution of GIC since about GIC, its uneven penetration rates into specific market areas of commerce and its confined overall penetration compared with expectations formed in the early 1990s.

Four specific features of GIC are central to the analysis presented in this paper:

1. **Global coverage.** One could almost add 'enforced' or 'involuntary' to this feature. GIC is demonstrably and inescapable global: buyers and sellers have world-wide choice available to them, as have facilitators and regulators. The catchphrase 'borderless commerce' catches this feature. It is the key to enhanced choice and transactions convenience of the medium. It is also the cause of headaches for regulators administering laws from for tax and antitrust laws within borders under the jurisdiction of the regulators.
2. **Cheap instant, easy access:** again the result of technology applied to commerce, buyers and sellers can make 'contact' with each other at zero marginal cost, immediately (and at any time of day) and without difficulty. This feature increases the range of options, competitors and complexity of the markets involved. The range of products and product versions is also endogenously expanded.
3. **Enhanced transaction multi-stage functionality:** because of the products and technology involved, and the opportunities presented by GIC, more parties performing more stages in potentially different geographical locations are implicated in the typical GIC transaction. The ease of making arrangements with extra-national parties encourages globally complexity: put simply, it is just as likely that ISP, payments facilitators, suppliers and marketers will operate 'in' different 'countries' as it is that they will operate 'in' the same countries as other parties. In a more cynical way, GIC operators have incentives to make multi-country complexity a feature of their set-up, if confusing and bedeviling the regulators is part of the objective.
4. **Separability of physical or traceable contact:** the parties to GIC transactions may never meet physically. If they feel the need, they can isolate themselves from each other and from regulators by acts of disappearance that are difficult to trace. While this feature, and others above, were possibly part of old commerce (e.g. mail-order catalogue sales), it is a more fulsome and inevitable feature in relation to GIC.

We shall return to these features through this paper as the driving forces of the regulatory and risk feature of GIC.

B. Some data on the penetration rates of e-commerce

A useful source for American data is the US Census Bureau (USCB) E-Stats (available at www.consus.gov/estats) . The USCB show that in 2005, E-commerce (on-line sales) as a percentage of sales stood at 24% for manufacturing (18% in 2000); 18% for merchant wholesale trade (9% in 2000); 3% for retail trade (2% in 2000); it was insignificant in primary production, and relatively low in most service sectors. The dominating share in manufacturing was B2B. In the retail sector, 90% of on-line sales came from on-line catalogue (non-store) shopping and motor vehicles and auto parts. In the services sector, the dominating transactions were financial services and travel.

In the service sector of the USA, the most significant on-line activity is, predictably, in relation to travel and reservation services, cited for 2005 at 23% of all sales, followed by on-line information services at 14%, then dropping to 2.3% for waste management services. For US B2C retail sales, the on-line proportion is just 2.2% for motor vehicles, 1.3% for furniture sales, 1.2% for electronics and appliances and 1.1% for sporting goods.

For the US economy overall, e-commerce accounted for 2.4% of all retail sales in 2005, rising from 0.7% in 2000, through 1.4% in 2003. These data are estimated from the monthly Retail Trade Survey of some 11,000 retail firms. The USCB finds a significant positive correlation between size of firm in manufacturing and internet access, being as low as 49% for very small plants (less than 5 employees) rising to 97% for plants with 2500 employees or more.

The following Australian data are taken from the business magazine, *Business Review Weekly* (BRW) as at 22/2/2007. These are not official data and the sources and methods for the estimates are not stated. The data do seem plausible and can be used for further examination. As for the US data, we confirm a significantly disparate relative use of GIC/e-commerce as between the sectors

Product Line	Online % 2006	Forecast 2010
Books/music/video	14.4%	27.5%
Pharmaceuticals	1.7%	1.8%
Consumer elects	3.1%	5.1%
Events Tickets	8.5%	17.5%
Clothing/Footwear	1.5%	3.4%
Computer Hwre/Swre	20.5%	33.6%
Groceries/Beverages	0	0.1%
Travel	30.5%	49.7%
Total Transactions	4.9%	8.2%

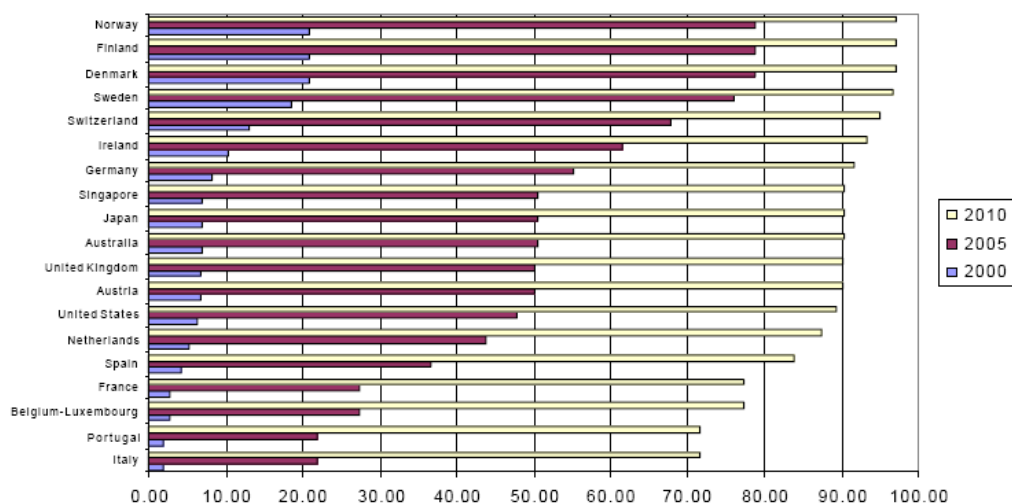
The data suggest continued further growth in the online percentage of sales in every sector identified, though marginally in some cases. They also reveal huge differences in the relative use of internet commerce, from insignificant in relation to (perishable product) groceries and beverages, as in the USA, to prominent for travel and computer supplies.

We can adduce immediately some reasons why the GIC role varies so markedly between sectors. First, where buyers feel the need to make direct physical inspections of the merchandise, as in shoes, fashion clothing and grocery products, there will be ongoing resistance to use e-commerce significantly. Overriding each of these estimates is the reluctance of a significant proportion of all transactors to use the internet for purchasing at all. Secondly, some traders have given overt incentives to encourage internet usage in place of direct face-to-face and telephone sales, as for instance in relation to hotel bookings where internet booking are frequently offered on more favourable terms. This factor has undeniably boosted the relative e-commerce usage factor in travel and tourism especially. Few other sectors have sought to encourage on-line sales so overtly.

In the finance sector specifically, there has been considerable growth of electronic transactions. In the 1980s, initial home banking service offerings were promoted by the PC with videotex trying to exploit its ability to connect to existing financial service platforms. By 2005 all of the major banks and building societies offered e-banking facilities using Internet and IVR for funds transfer, account balances, bill payments, ordering bank statements, historical transaction overviews and bank information services. The Internet is the main access medium for e-banking, and by early 2007, the number of Internet banking users in Australia had passed 8 million subscribers. The online broking market has also matured, seeing the 30 or so service providers consolidate into just 10 by 2005.

Some data from Kellermann cites e-finance penetration as already over 70% in Scandinavian counties, around 50% for other developed countries, including the USA and Australia, with some other countries lagging behind. Kellermann predict usage rates over 80% for most countries by 2010.

Figure 1. E-Finance Penetration: 2000 and Projected Rates for 2005 and 2010



Source: World Bank – report into E-Commerce by Tom Kellermann.

Readers need to be careful about the definition and extrapolation of such statistics. Often they are based on numbers registered for e-banking rather than actual executions. Often the extrapolations simply place trends through past series, without exploring the economics behind the data. It is plain that e-finance usage is restrained by risk factors perceived by the potential users. To follow this through, and its implications, we can return to an important economic framework that encapsulates RISK. We will need this framework to analyse other risk-based decisions, as for instance to risk illegally failing to declare tax which might legally apply to internet transactions.

One logical issue that follows from considering the potential significant advantages of e-commerce is this – If e-commerce is that good, **why hasn't it progressed even further**, especially in Australia?

Some immediate reasons for incomplete adoption of e-commerce are:

1. capacity/bandwidth limitations (especially comparing the USA with most other countries, including Australia)
2. computer connectivity coverage – not every one is on line or on line when they need to transact
3. psychic resistance – some potential transactors fear the consequences of on-line trading
4. inapplicable products – the need to look, touch, verify, test and return some physical products acts as a deterrent to purchasing on line
5. perceived security problems – concerns that information associated with the e-commerce transaction could be misused
6. habit/persistence favouring old commerce.

C. Market Definition in Anti-trust analysis: A new challenge from GIC

Plainly, GIC was not anticipated when traditional business regulations such as competition policy laws were framed and evolved. For the most part, the laws dealt with physical products and identifiable services. Some laws did not handle international trade in goods and services very well. Over time, the adaptations were made.

The biggest impact on existing competition policy law is in relation to the definition and applications of 'market boundaries'. Competition policy laws need market definitions to give meaning to important competition concepts such as market shares and entry barriers or entry conditions. Without a definition and delineation of market, these concepts have no precise meaning at all.

It is likely that competition policy will have to be reformed or re-interpreted to handle GIC. For example, what is the meaning of "a market in Australia", a term that figures prominently in the Australian Trade Practices Act (ATPA) when global electronic commerce with a geographical spread of buyer/seller/facilitator/server/insurer/ payments host applies? In another dimension, e-commerce widens the spread of actual and potential competitors and may thus be seen as pro-competitive. A third point is that government may look to existing regulations including competition policy to provide relief and enforcement mechanics for some of the deemed adverse effects of e-commerce

"Market" in economic analysis refers to the functions (that is, the stages of production or distribution), the regions (location of buyers and sellers) and the product ranges in the "field of rivalry" most relevant to the competition process in which the commercial transactions are organised. Economists have written consulted and given evidence extensively on the application of principles of economics concerning "market". Market is a field of economic activity within which most of the relevant current business rivalry takes place and its boundaries define the outer limits of this active rivalry in the geographical, functional and product dimensions. Markets constitute also by their boundaries the domain that would be crossed by potential entrants to a market and are relevant to computing market shares. The "functional" aspect to markets is basically the range of production or distribution sequences that might properly be counted into a market.

In the economic approach to market definition it is important to test what would happen of the prices of subject products were to increase, relative to the prices of adjacent products (which might remain relatively unchanged). To an economist, this is stated as performing a demand-side substitution test.

We **MUST** logically provide at least a provisional definition of market(s) before we can undertake competition analysis, even if the latter causes us to return to market definition and made amendments.

A market definition exercise **MUST** be done first; otherwise, what meaning can be placed on statistics or discussion of "market share" and what meaning attached to "entry" (into a market). It is also argued that the emphasis on market determination can be excessive when the central issues are to determine offences based on specified conduct.

The general principles in relation to market delineation have been established for some time and follow closely the economics literature based around "substitutability". Note that a test of "substitutability" makes no sense when applied to the functional aspect of market boundary setting. But what about "electronic markets?"

Antitrust authorities have before GIC face d problems with geographical aspect s of market definition. In matters concerning professional cricketers moving between nations, the resistance to an 'international market' became difficult to sustain. Similar issues emerged recently concerning international freight issues. Two judges in Australian courts have accepted that international markets ARE involved but where any part of the transaction embraces Australia the market is "in" Australia. (Federal Court of Australia, 2009, FCA 510, 20 May, 2009) How would the courts handle uranium sales where under current Australian law, sales of U308 are expressly prohibited 'in Australia'? E-commerce raises further challenges, akin to many disputes in the USA concerning state sales tax laws.

<p>The RISK is that many GIC potential offences will not be caught because national statutes will place their activities formally outside the purview of regulation. The greater risk is that until this is settled the meaning of competition policy provisions will be demonstrably uncertain and difficult to predict. The remedy is nothing short of a re-write of competition statutes to recognize borderless transaction and to remove words of the form "market in (specified countries)".</p>

D. Taxation Losses from Global Internet Commerce

Because of the manner through which e-commerce is executed, there are opportunities for concealment, confusion and perceived opportunities to evade tax. This is especially so when several international locations are involved, where tax laws have not anticipated e-commerce developments, international co-operation and anticipation is inadequate and the integrity of commercial operations is deficient. In short, tax evasion through GIC is potentially rife.

The configuration of difficult-to-trace operations makes it propitious to avoid paying any tax, including transaction taxes, income taxes and company profit taxes. Add to these obscurities the complications that tax law may be nebulous or ambiguous as to which country has the legal right to collect the various taxes. Such a set-up caused panic among the world tax authorities in the middle 1990s as e-commerce was emerging. It led to a host of commissioned papers on how to handle an impending tax crisis, domestic and international conferences, and some concerns at international level about substantial erosion of the tax base. Tax authorities such as the USA Internal Revenue service, the British Inland Revenue and the Australian Taxation Office started to conferring on what they say as an issue that known only an international solution. The ATO website provides some of the commissioned papers. In the commissioned papers it was common to provide diagrams giving a pictorial representation of e-commerce operators, dividing their functions between different countries or being capable of smothering their identities as soon as any tax investigations were commenced.

The *Ecommerce Times* (21/5/2009) reports uncollected sales taxes on online transaction in the USA at US\$13bn. Based on University of Tennessee estimates, the losses will quadruple within five years. Li and Fung (2009) continue to report the loss of tax revenue as one of the major issues already arising from the rapid recent growth of online retailing in China.

The economist approach to modeling tax evasion decisions is one of the most incisive and beneficial applications of economic theory. It has the advantage of emerging from the framework for risky decisions - good and bad outcomes – as deployed in economist considerations of finance. (following Allingham and Sandmo (1971))

The general message affirmed by the decision-making framework is that there are huge incentives to tax evasion, if the payoff is substantial the probability of detected is small and the penalty rate is not prohibitive. All that suggested a number of options for both the taxpayers and the tax authorities.

The writer has further simplified the AS equation for an extreme case, and it produces a most powerful conclusion: declare the proportion of true taxable income: $p/2t$.

GIC replaces old-economy personal income, corporate profits and transactions with alternative financial flows much more susceptible to tax evasion than in their old-commerce form. We can structure a simple model of potential tax losses as a percentage of national income. As the penetration rate of e-commerce rises, tax losses have the potential to become the nightmare that in the 1990s the tax authorities feared would occur. In relation to the taxation losses from e-commerce, we can say that, as with e-commerce generally, the biggest news is yet to come. The other observation is that GIC shatters the old working rule that only personal income tax is subject significantly to tax evasion. No solution short of urgent and

effective international co-operation seems credible. Some attempts at international co-operation to limit GIC-based tax losses is reported in Nellen (2003)

GIC is yet to make its greatest financial and policy impacts.

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