Overcrowded Internet domain space is stifling demand, suggesting a future 'not-com' boom

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New research suggests that a lack of remaining domain names with easy to remember – and consequently valuable – word combinations is restricting Internet growth, with an untapped demand of as much as 25% of all current domains being held back. The study's author contends that the findings show ICANN's release of new top level domains could prove a wise policy.

As the digital age dawned, pioneers successfully snapped up broad swathes of the most popular and memorable domain names, such as nouns, places and combinations thereof – claiming valuable 'virtual real estate' under the top level domains such as dot-com, dot-co-dot-uk and so on.

Now, the first research to try and define current demand for Internet domain names suggests that the drying up of intuitive and familiar word combinations has seen domain registration drop far below the expected appetite, given the extent to which we now live online, with new entrepreneurs struggling to find "their slice" of virtual space.

In fact, the study estimates that the lack of available high quality domains featuring popular names, locations and things could be stifling as much as a further 25% of the total current registered domains.

With the total standing at around 294 million as of summer 2015, this could mean over 73m potential domains stymied due to an inability to register relevant word combinations likely to drive traffic for personal or professional purposes.

However, as the Internet Corporation for Assigned Names and Numbers (ICANN) has begun to roll out the option to issue brand new top-level domains for almost any word, whether it's dot-hotel, dot-books or dot-sex – dubbed the 'not-coms' – the research suggests there is substantial untapped demand that could fuel additional growth in the domain registrations.

Dr Thies Lindenthal from the University of Cambridge, who conducted the study, says that – while the domain name market may be new – the economics is not. The market fits nicely onto classic models of urban economics, he says, and – as with property – a lot rides on location.

"Cyberspace is no different from traditional cities, at least in economic terms. In a basic city model, you have a business district to which all residents commute, and property value is determined by proximity to that hub," said Lindenthal, from Cambridge's Department of Land Economy.

"It's similar in cyberspace. The commute to, and consequent value of, virtual locations depend on linguistic attributes: familiarity, memorability and importantly length. A virtual commute is about the ease with which a domain name is remembered and the time it takes to type.

"The snappier and more recognisable a domain, the more it is going to be worth. What I find fascinating is that the observed transaction prices of domain names reveal a free market valuation of linguistic characteristics and language itself," he said.

From 2007 onwards, annual additions to the domain stock began to lag, while between 2006 and 2012 re-sale prices of domain names already registered rose 63% – indicating a demand for virtual 'locations' outpacing the supply of available attractive names, with competition driving up prices.

Recently, ICANN began the release of 1,400 new top-level domains, the 'not-coms', to expand current extensions such as dot-com, dot-org etc, with the aim of expanding the domain supply.

Google were one of the first to use a 'not-com' to get around the domain name shortage. Finding all obvious domains taken for its new parent company 'Alphabet', the company acquired space on the new dot-xyz domain to create the canny web address: www.abc.xyz.

Serious money is currently being invested in 'not-coms'. With initial application fees around the $185k mark, Lindenthal says it could be as much as $2m before you have the necessary infrastructure to secure and manage your new top level domain, but, once owned, you are able to set prices for anyone who wants to acquire virtual real estate under that domain.

"By 2013, as much as $350m had already been put down in application fees alone, and further billions must have been invested. Clearly, corporations and entrepreneurs have trust in the new domains being able to serve a previously unmet demand, and from this research it appears some of them may be right," said Lindenthal.

For the study, published today in the Journal of Real Estate Finance & Economics, Lindenthal set out to get a rough idea of the demand for name registration not served by current top-level domains.

Looking at just dot-coms, he compared existing registrations with census data for popular family names in the US. "You have to assume someone called Miller is as likely to register a domain with their name in it as someone called Smith, for example. So, roughly speaking, if there are twice as many Millers, you would expect to see twice as many domains with that name in it."

Lindenthal found that the more prevalent the family name, the lower the number of domains featuring that name per head of population. Moreover, a one per cent increase in a surname pushes up domains featuring that name by only 0.74% – suggesting a substantial gap between likely demand and current domain registration.

Lindenthal also explored domain registration featuring city names compared to size of the population, and found a similar gap between expected demand and current domains.

Using statistical modelling analysis, he concludes that – based on the available data – an estimate for domain name demand not met by available word combinations is as much as 25% of all currently registered Internet domains.

A shorter 'cyber-commute' was found to be more desirable. Increasing the length of a surname by just one character, from six to seven, reduces the number of registrations by a remarkable 24%.

The shorter the better holds true for emerging 'not-coms', says Lindenthal. "Shorter names are more valuable and lead to greater registrations. With new top level domains named for cities, for example, it was the concise city names – dot-london; dot-miami; dot-berlin – that went first, and now anyone who wants to buy virtual space under those domains has to buy it from the new owner.

"More cumbersome city names are not seen as a good investment. For example, despite being a global centre for Internet technology, dot-sanfranciso is still up for grabs. Do you want to be the digital mayor of a new San Francisco domain? $2 million and it's yours!"

However, while the new 'not-com' boom will open up huge new areas of the Internet, Lindenthal says that the overarching constraints will kick in again further down the line – which may be precisely what makes the new top level domains a worthy investment.

"The set of catchy keywords that appeal to humans is still bound by the way we process language, even if we had unlimited choice in top level domains," he said.

"Legend has it that Mark Twain advised to buy land, since 'they have stopped making it'. Similarly, one can argue that investing into top level domains is a promising business venture, since we have stopped inventing language, at least at a large scale."

More information: Thies Lindenthal. Monocentric Cyberspace: The Primary Market for Internet Domain Names, *The Journal of Real Estate Finance and Economics* (2016). DOI: 10.1007/s11146-016-9547-2

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