MAKING THE INTERNET MORE VALUABLE TO AFRICANS: Evidence that content in the right languages can drive adoption and generate big benefits

The introduction of a Setswana language interface on the South African Google search website led to a big increase in internet usage among Setswana speakers – and it may well be helping them to find jobs. These are among the findings of research by Bastiaan Quast, to be presented at the annual congress of the European Economic Association in Geneva in August 2016.

His study notes that internet adoption in sub-Saharan Africa has been stagnating, even though it has become more affordable. Often the problem is that there is not much relevant content for certain groups – and therefore not much perceived incentive for people to go online, which perpetuates the situation.

The new research follows the effect of a change in relevant content: the introduction of Setswana, the main language of Botswana, on the Google search engine for Botswana, and also for Setswana speakers who use the South African version of Google. The author finds a 182% increase in internet adoption among Setswana speakers in South Africa, with no observable change for native speakers of other languages in South Africa.

There is also an increase in computer ownership among this group. There may be additional benefits, the author adds: ‘When I examine the group of new internet users among Setswana-speaking South Africans, I observe a strong subsequent increase in employment levels.’

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This study shows that the introduction of the Setswana language interface on the South African Google search website caused a 182% increase in internet usage among Setswana speakers, while remaining level for other South Africans. The author also observes a strong increase in employment levels among the newly connected Setswana speakers, compared with other groups, suggesting that stimulating internet adoption has substantial positive side-effects.

Despite recent improvements in connectivity and affordability, internet adoption in sub-Saharan Africa is stagnating, suggesting that demand is lower than expected.

The value of internet access to users is dependents on the availability of relevant content. Conversely, the value of creating content depends on the number of potential viewers. This feedback mechanism is known as a two-sided market.

This study expands on this two-sided market framework, by viewing internet access as a value-chain of markets with network effects, whereby additional protocols (such as email) create new markets built on existing ones. By including natural language as a protocol for Internet-based communication, it emerges that the two-sided market for websites, essentially consists of a many parallel two-sided markets, one for each language.

This framework can be used to understand how despite the enormous offering of internet content, demand for internet access is not always high.
Due to the feedback mechanism between users and content, it is difficult to isolate a causal effect. In other words, if we observe an increase in users and content in a language, which causes which?

To solve this chicken-and-egg problem, the study focuses on the effects of a ‘spillover’. Setswana is the main language of Botswana and Google therefore developed the Setswana language interface for the Botswanan Google Search website (google.co.bw).

But there is also a large population of native Setswana speakers in neighbouring South Africa. As a result, the Setswana interface was also introduced on google.co.za, a spillover of the original work being undertaken for Botswana.

The researcher uses this event to study the increase in internet adoption among Setswana speakers in South Africa, as compared with the increase of native speakers of other languages. Although this in itself does not constitute a large addition to the amount of Setswana language content on the web, it does make this content much more accessible and since Google is often the first website visited (especially since Android smartphones are the primary means of access) it is also encouraging if this is in a language people know.

The study finds a 182% increase in internet adoption among Setswana speakers, whereas there is no observable change for native speakers of other languages in South Africa. In addition to this, there are increases in computer ownership and a strong increase in the number of search queries in the Setswana language.

Examining the group of new internet users among Setswana-speaking South Africans, there is a strong subsequent increase in employment levels.

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‘Making the Next Billion Demand Access: The Local-Content Effect of google.co.za in Setswana’ by Bastiaan Quast, Centre for Finance and Development working paper:

http://graduateinstitute.ch/home/research/centresandprogrammes/cfd/publications/working-papers.html

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