

Comments and reply about "**Invention Quality Measurement (IQM) 1. Patent Valuation. The Methods That TRIZ Forgot**" (TRIZ Journal, Sept. 2003)

From Jose Vicente:

Firstly to say that the title is for me good enough. Up today most people, including those cited in the paper, speak about patents as a measure of innovation. And this is where patents fail at most. Of course they are an indirect parameter for innovation, but exactly that: indirect. As Harvard professor emeritus and longtime student of the field says, "While it can be argued that patents are somehow related to innovation, nobody has ever established that."

So linking 'invention' and 'patent' is good since both concepts are comparable. Altshuller and TRIZ did establish a relation when elucidating the 5 levels of invention and that in the future only levels 3 or more should deserve a granted patent.

Regarding the parameters to measure the quality of a patent and its quality of invention, I would like to comment on some of them:

- **Citation** : There are simple yet strong patents difficult to circumvent and almost not cited at all. It is a necessary parameter to take into account but not sufficient, as the article suggests.

-**Family size**: With no doubt the more international a patent is (and so the bigger its family) more probably it is strong or it has a potential market. But one should not forget that as patents are costly, there should be a strong correlation between the size of the applicant and the size of the family.

There is still another parameter analyzed by Harvard Prof. Michael Porter and M.I.T. Prof. Scott Stern, called '**the innovation index**' that takes into account the quality of inventions besides parameters as quantity, citations, etc. Also Francis Narin, also cited, suggests three valuable parameters to measure the quality (level) of an invention: a) 'citation intensity'; b) 'Science link' or how close to the science is the invention (Altshuller level 5th ;-)) measured by the number of scientific papers cited in a patent; and c) 'technology cycle time' or median age of the patents cited in a company patent portfolio

Finally I would suggest to explore some of the articles of a colleague: 'W. Bradford Ashton' of Batelle, who has for long time studied trends and parameters related to patents and innovation etc.

Best regards,

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Reply from Barry Winkless:

Dear Jose

Many thanks for your comments in relation to my article IQM- it is good to know someone reads my articles! I am in total agreement with regard to the need for the integration of patent valuation measures and TRIZ. In relation to citations I would direct you to measures of originality and generality- my research suggests that there are definite links between a patents originality and the inventive levels with originality being a measure of the number of backward citations used by the patent but outside of the patent's Patent classification (for example a 'Food' classified patent may cite a patent from an electronics classification). In my next paper I explore these measures as well as further delving into different patent valuation measures. In relation to science references links with 'quality' I am leaning towards (in my research) that the number of science refs may be correlated with the increasing complexity then increasing simplicity trend in TRIZ. For example in research related to food browning susceptors I found that the patents citing scientific papers represented the most complex (not necessarily the best!) patents within their sub class group. Measuring science references may therefore be a good indicator of complexity with regard to TRIZ. I think more work needs to be done on the importance of science references versus the importance of patent references- if you know of any work done in this area I would be most grateful.

Family size for me is interesting but in relation to actual invention I think other parameters are much more important- for example taking some of Unilever's inventions many have not solved any contradictions and are low in inventive level however due to the size of the company many of the patents have US/JP and EP numbers. So with regard to actual invention I'm not sure it is a good way to go. I am aware of Porter's work with regard to innovation but I am not convinced! In relation to your colleague W.B Ashford any references by him would also be much appreciated. With thanks and best regards

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Reply from Jose Vicente

Dear Barry,

William Bradford Ashton works at the Batelle Northwest labs. at Virginia and has published about trends in patents in journals like Intl. Journal of Technology Mgmt., etc.

Thanks also for your feedback, I am a keen reader of TRIZ Journal and work also around technical intelligence and patents. I agree that Porter tries to find 'grial' relating to innovation and capital and competitiveness, whereas your work is more on inventiveness which also interests me a lot. I myself am performing some coarse statistic analysis of patents using TRIZ for my doctoral thesis (if I ever finish it ! :-)) which will be glad to share when it is finished. Then we could collaborate to publish something together, which I would be proud of.

Best regards
Jose