

A THROAT CHOKING BARRIER TO E-COMMERCIALIZATION OF SCIENCE IN SPREADING PUBLIC BENEFIT

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Abstract

This article presents the back door obstacles and crucial part of e-Commercialization of science in spreading public benefit. It also enlightens the reasons and effects behind the creation of this barrier in transferring the know-how of an innovator to the needful public and illustrates some ways to mute it.

I. INTRODUCTION

Commercialization is the process or cycle of introducing a new product or production method into the market. It is a v-shaped funnel programme that goes through the channeled steps of scientific knowledge gain plans, various production development strategy, advertising and sales promoting ideas. An important discussion on the commercialization in research and technology for different cooperative research programme between R&D, institutional and industrial laboratories can be found in [1,2]. The case study of the same problem in Austria has been made by Wood in the research paper entitled "The Commercialisation of University Research in Australia: issues and problems" [3]. The Commercialization of intellectual property has three key aspects [4]:

1. Sustainable long-term business opportunities.
2. Creating an era of its key goals and milestones.
3. Beneficial to human life.

The third aspect of commercialization is the key part that may extend to overlap all other aspects of commercialization.

e-Commercialization is the prior Information Technology (IT) based method of transferring knowledge about one's intellectual expert skill or his innovative property, products and services through proper licensing deals. Today the whole scientific community is reaching towards the increase in commercialization of science based knowledge through the said tool that results in the formation of spin-out companies in the targeted direction. But, it has to limit its fluorescence in the light of following implementing mechanisms.

- Technology transfer of the developed processes, strategies and implementation of knowledge
- E-commerce outline and IT guidelines.
- Copywrite protection of script and specific notes of an author.
- Cost and economics of technology licensing.
- The role of direct and foreign investment in technology transfer and competition
- Intellectual property protection: rights, international transactions and agreements
- Policies for licensing of intellectual property and technology acquisitions
- Defence technology transfer and conversion
- Spin-offs from public technology sources
- Patent licensing, intra-firm licensed technology and knowledge transfer
- Technological cooperation patterns: R&D consortia, international strategic alliances
- Commercial applications of technology transfer and associated risks

e-Commercialization permits the fast sharing of ideas and technique through viable permission of the inventor. It leads to revolutionize the new era of knowledge based researches that climb towards human benefit. The role of management consultants in the development of e-Commercialization were discussed in detail by Bloomfield *et al.* in [5]

II. PROS AND CONS OF INCREASING e-COMMERCIALIZATION IN SCIENCE

Increasing e-commercialization in science is a vital source of uplifting and acquiring the fast track to the knowledge based skill of individual and transferring it to the whole community. It not only serves the particular domain or a region or a nation but it highlights the whole community and human life. It has a Plethora of advantages. Some of them are

1. It is the epitome of progress that extinguishes the long lasting need of requirement.

2. It leads to the growth in economy and suggests the path for further development.
3. It is a boom to medical science. Medical scales, tests, techniques and genetic material developed by a researcher group help other to inculcate and lead the sufferer towards a peaceful life. It also helps to eradicate the vital spread of human epidemic.
4. It fulfills a agrarian society by providing the new concept to agriculture.

Thus the e-commercialization is that tool which helps in handling and shaping many ongoing problems of present scenario.

Beside a number of advantages, there are some back locks thanks to profit of an entrepreneur or a researcher or supremacy of the developer to its competitor [6,7]. They part their labor with the money in exchange for the product benefit they anticipate. Others cannot access the developed product/ideas for implementation due to the following restrictions. [8].

1. Copyrighting or patenting medical scales, tests, techniques and genetic material, limits the level of public benefit from scientific discovery.
2. Most commonly used rating scales are under copyright and researchers have to pay for their use.
3. Some genetic tests also carry patents, which prevent other laboratories from doing the test for a lesser cost. For instance the patents held by Myriad Genetics for the diagnosis of mutations in the BRCA1 and BRCA2 genes (linked to breast and ovarian cancer).
4. Extreme commercialization of science can also lead to patents on medical procedures and techniques.

These tools of commercialization of science restrict the access to vital scientific knowledge and delaying the progress of science. The increasing commercialization of above parameters in terms of patenting can be analyzed in [9]. Based on the data, the worldwide patent position in 2008 is illustrated in Table I, II, and III. The comparative status over year wise ownership through different modes can be observed in chart I and II. The analysis suggests the fair increment in the tendencies of book marking their respective hologram parameter. This suggest that entrepreneur or a researcher or the developer have the motivation more towards their profit specialization rather than public benefit. The case study of the relationship between Public research agencies and manufacturing enterprises has been taken by Yencken et al. in the article entitled [10].

III. HOW TO ERADICATE THE PROFIT BASED e-COMMERCIALIZATION IN SCIENCE

Non-profit organizations should come ahead in taking care of crucial field of innovation where profit can be subsidized and human value cannot be put at the risk of pithy. The aim for such knowledge should be that it is freely shared without any boundaries of sharing. This is possible only when academic scientists and researchers consider the prestige of discovery more important than monetary reward.

Medical researches should have the motivation of saving the humanity from the evil effects of diseases, especially those which are non-curable like "cancer". All genome sequences generated by the human genome project should be deposited into a public database freely accessible by anyone.

The fundamental philosophy of Western science should be adopted. Their motivation is only sharing of knowledge. They think that patenting is a useful tool for protecting their investments in industry.

Policies makers should allow patent commercialization for free flow use in public welfare interest concern to prime fields as medical application.

IV. CONCLUSION

e-Commercialization permits the fast sharing of ideas and technique through the means of information technology. A new product will only succeed if,

- i. It satisfies a customer's needs, wants and desires
- ii. It can be economically produced and sold at the right price.
- iii. Delivered to the market through appropriate distribution channels within the window of market opportunity.
- iv. Satisfies applicable safety or performance criteria and delivers lasting value.

e-Commercialization helps in sharing the ideas, innovations and market demand to manufacturer and researcher who want to make reputation in market and earn profit by selling their basic ideas. However patents, copy writes and other standards limit their free flow use in market. It is beneficial for the developers and pay for their labor, but in some aspects of need where human value is prime most important, patent should be subsidized from copying. New policies should be formed to make the feasibility of part copying the ideas for public interest.

V. REFERENCES

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Appendix

TABLE 1: TOP 20 COUNTRIES IN FILING PATENT APPLICATIONS (LAST DATA: 2008)

Rank	Country	No. of Patent Applications
1	Japan	502,054
2	United States	400,769
3	China	203,481
4	South Korea	172,342
5	Germany	135,748
6	France	47,597
7	United Kingdom	42,296
8	Russia	29,176
9	Switzerland	26,640
10	Netherlands	25,927
11	Italy	21,911
12	Canada	21,330
13	Sweden	17,051
14	Australia	11,230
15	Finland	10,133
16	Israel	9,877
17	Spain	8,277
18	Denmark	7,719
19	Austria	7,711
20	Belgium	7,591

TABLE 2: TOP 20 COUNTRIES IN GETTING PATENTS (LAST DATA: 2008)

Rank	Country	No. of Patents Granted
1	Japan	239,338
2	United States	146,871
3	South Korea	79,652
4	Germany	53,752
5	China	48,814
6	France	25,535
7	Russia	22,870
8	Italy	12,789
9	United Kingdom	12,162
10	Switzerland	11,291
11	Netherlands	11,103
12	Canada	8,188
13	Sweden	7,453
14	Finland	4,678
15	Australia	4,386
16	Spain	3,636
17	Belgium	2,948
18	Israel	2,665
19	Denmark	2,347
20	Austria	2,306

TABLE 3: PATENTS IN FORCE OF TOP 20 COUNTRIES
(LAST DATA: 2008)

Rank	Country	No. of Patents in Force
1	United States	1,872,872
2	Japan	1,270,367
3	China	828,054
4	South Korea	624,419
5	United Kingdom	599,062
6	Germany	509,879
7	France	438,926
8	Europe	268,384 (E.P.O.)
9	Hong Kong	227,918
10	Spain	166,079
11	Russia	147,067
12	Canada	121,889
13	Australia	107,708
14	Sweden	105,571
15	Belgium	87,189 (2003)
16	Ireland	78,761
17	Mexico	73,076
18	Monaco	50,392
19	Luxembourg	49,947
20	Finland	47,070

CHART 1
YEAR WISE NUMBER OF APPLICANTS CLAIMING THEIR OWNERSHIP IN TERMS OF DIFFERENT PARAMETERS

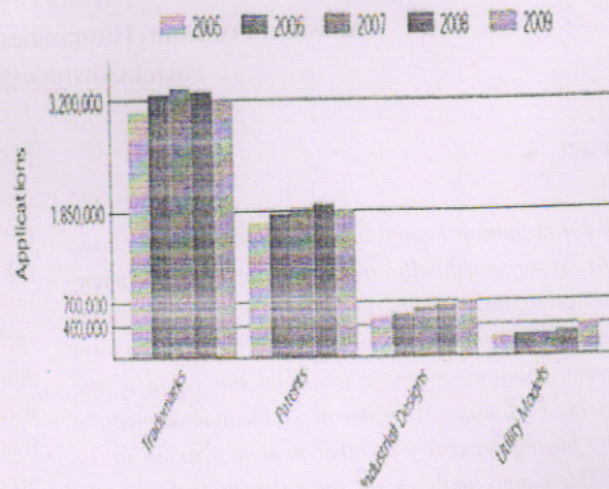


CHART 2
% GROWTH IN APPLICATIONS FOR OBTAINING OWNERSHIP OVER DIFFERENT PARAMETERS

