

# Economic development

[Economics](#)



Development has been the major policies of most advanced countries; the only difference is the system the policy makers of each country have been able to implement the policies of innovations. The U. S. is one of the countries that have taken policy of R & D as its major policy. Although most EU countries adopt innovation policies in their programs, most of them still lag behind in the funding of R & D.

The European Innovation Scoreboard of 2007 shows the gap between EU and U. S. in the innovation policies. Although EU has been constant in financing the R & D since 1996, but U. S has gone further in improving the funding of innovations. Nevertheless, the scoreboard of 2007 still shows that many western countries have been strengthening research and educational policies by funding universities and research. U. S. continues to have an edge in innovations compared to other EU countries. Both the United States and the European Union have common goals in setting worldwide leadership of science and technology. Although the U. S. may be leading in most input and output indicators, they must have target in their goals to lead the world in Research and development and other Intellectual property.

The innovation scoreboard of 2007 has revealed that the EU has taken the lead in few metrics but U. S. is still leading in most qualitative indicators in the fields of research and development. Thus, in this new global era, the U. S. -E. U. economic relationship still remains the largest and in the world. Daily, millions of consumers, producers and workers benefit from the mutual relationship of the two blocs. There are indicators that the two blocs have

more to benefit by increase funding on innovations and to further increase developments in their countries.

INTRODUCTION For innovations to occur, government or organisations must be able to reinforce capacity in bringing up new ideas. The government must create favourable business environment for firms to successfully operate. Moreover, the business organisations must be able to put insight and ideas into practical use in order to develop new products and services. In the present competitive global economy, the government and organisations must adopt innovations in their yearly policies in order to improve the level of economic strength.

No companies can survive without continuous flow of innovations. The innovation, which simply means dynamic introduction of new products and services in the system and for a company to produce new products, innovations must be reflected in all its activities. Innovation in another sense is a process by which public and private organisation create value to their customers by transforming technology and new knowledge into profitable products and services . If there is high level of innovations in the country, there will be growth in GDP and increase in per capita income.

Moreover, there will more jobs in the country and level of economic growth will increase which will lead to increase in standard of living. For a company increase its market shares, its sales technique, its marketing strategies, its research and development (R & D), its system of production and human resources must all be innovated. For organisation to achieve success in their operations, the whole process of innovation should not only be reflected in

the R & D, the senior management should also be a decisive factor in the innovation of the company policies.

(Clause, 1998) In other words, innovation within firms involves high level of certainty and human creativity. For firm to benefit in a large way in innovation process, the managers or the directors of the organisation must be able to master the competitive environment in which they are operating. Moreover, they must be conscious of strategies to improve their products and services. The management must always undergo constant training to improve their skills to come up with new ideas in making sound business decisions.

Meanwhile, no company can stand the loss of market share for a long time or make constant price reduction to survive. For a company to have imperative to innovate, the managers must understand the working of technology in the innovation process. Paul and Welfens state in their book " Globalisation, Economic growth and Innovations " modern computer technology and the rising role of software -relative to hardware -have contributed to the faster diffusion of new technology worldwide. (Paul, Welfens, 1999. P. 4)

The improvement in science and technology and introduction of sophisticated technology to improve the existing products and services has led man to search for knowledge through the knowledge acquisition to invent new or improve the existing products and services. For example, the use of new electronic publishing has taken over the use of old laborious mechanically printing machine thus with the power of dynamic innovations, there are high reduction in cost of production while using electronic publishing to publish books.

Additionally, in 1970's and 1980's, computer machine had been viewed by many, to be only operated by mathematicians or scholars in technology, but in early 90's, with launching of microcomputers by Microsoft in USA, the old notion of computers has virtually eroded. Presently, virtually all household in western countries can boast of having a desktop or laptop computer in their home. Operation system of computer is now easy for anybody with average level of education to understand.

Bill Gates, the founder of Microsoft has been able to introduce the dynamic innovations into the operation of microcomputer and the microcomputer has now been useful to individual, small or big organisations. (Clause, 1998) Moreover, for innovations to have meaningful impact in the productivity of firms, relevant economic behaviour must be observed so that a firm can be able to accomplish its commercial objectives, developing new capabilities or exploiting opportunities and meeting challenges in the business environment. (Johan, 1998).

Finally, the enforcement of patent law should be increased to protect private and public organisations from counterfeiting. U. S VERSUS EU POLICIES OF INNOVATION: U. S. Innovation policies Apart from innovation system and policies at the level of firms, the policies of innovations have also gone into National and regional level. In today's global economy, local and regional authorities have an ever-increasing responsibility to reinforce the capacity of their territories. In comparing the policies of innovation of European countries with U.

S policies of innovation, the policies of innovation is much better in U. S than Europe and better practiced than Europe. This was revealed in the paper <https://assignbuster.com/economic-development/>

delivered by Jean Rostrup-Nielsen, Haldor Topsor and Lygby at Roskilde University . They stated that “ about 1/3 of U. S Government budget goes to direct support of industrial R ; D”. They further argued that the significant higher fractions of 14% of industrial R ; D being publicly funded in U. S compare to EU, which was 8%. (Jeans, Nielsen, 2003. P. 1). The funding of U. S. on R ; D yearly amount to billion of dollars.

For example, in 1999, FY, U. S. government gave out \$1. 2 billion to fund R ; D; the aim was for the development of small firms through the Small Business Innovation research (SBIR). Additionally, 250 million dollars was disbursed for the funding of Advanced Technology program. The American government has being in the fore-front in encouraging the small firms, the formation of small Business Administration (SBA) has been aimed at giving medium or long-term loans to small firms. . Yearly, the SBA disbursed out loan worth’s billions of dollars to firms all over United States.

(Peter, Susan. 2003. P. 52) Additionally, Federal and State governments disburse billions of dollars yearly in the form of grants to 26 Federal Grant-making agencies. The purpose is to encourage universities, research centers, individual and organisations to come out with new ideas and innovations that may benefit the whole economy. U. S. government has also been in the forefront in funding the presentation of published papers from academic research cited in U. S. patent Fund development. (Jeans, Nielsen, 2003. P. 2). In 1980, U. S.

government enacted Amendment to the Patent and Trademark Law, the Bayh –Dole Act. These laws are to protect intellectual property of individual or organisations U. S government has also gone further in assisting the

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formation high Tech firms by the formation of advanced technology program. . (Peter, Susan. 2003. P. 44) To further increase the funding in the field of science and technology, U. S. government created National Science Foundation from National science Foundation Act of 1950; its mission was to fund researches in science and technology and funding of R; D.

The National Science Foundation funds the research in the fields of science or science related field like computer science, mathematics, Biological science. Physical sciences, environmental sciences, Engineering, Education, social, Economics and Behavioral sciences, among others (NSF) Fig 1 below illustrates the innovations performances of U. S. and other European Countries in the year 2007. From the table, U. S. government spent more money on the Improvement and protection of intellectual property (IP) in the year 2007.

Other sectors that received government attention were knowledge creation, which includes the development of science and technology. Apart from federal government funding on innovation, states government are also having different policies in helping their citizens. For example, almost all states in the United States give unemployment benefits to the unemployed. Moreover, the aged people. Additional, some states have gone further, in subsidise the cost education or gives scholarship to their citizens. FIG 1: INNOVATION PERFORMANCE OF EU-US IN 2007 (PRO INNO EUROPE

BELGIUM INNOVATION POLICIES Although Flanders had been launching programs for the innovations of the country's development before 1990s, it was in the middle of 1990s that the government focused on the R ; D. Funding of R ; D increased by 1% 1990s and by 3% in the year 2000.

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Between 2000 and 2004, more money was pumped for the innovation plan especially in science and technology. (Paul, Welfens, 1999. P. 7) . To further, improve the research and development in all its university in the year 2000 the Flanders reshaped the mechanism in the research and development.

The government had also gone further by optimising the preparation, implementation and evaluation of the science and technological innovation policy by taking step to give a high priority to the science and technology in 1999 . (Paul, Welfens, 1999. P. 4) Despite the effort of Belgium government to increase funding on innovations the country is still among the group of countries that lag behind in innovation. The country performances on innovation are above the EU average. From the chart below, it is revealed that.

Belgium performs above the EU average on the Knowledge Drivers, Innovation and Entrepreneurship, and Intellectual Property. It is below EU average in Knowledge Creation, with a relatively low level on the indicator of R; D expenditure. The performance of the country is also low in the exportation of high technology products and its output on intellectual property is below average. FIG 2: BELGIUM INNOVATION CHART 2007 (PRO INNO EUROPE) Performance chart by indicator FINLAND INNOVATION POLICIES The Finland government started pursuing the innovation policies from 1980s.

The government policies and an instrument on innovations has now made the country to be among the innovation leaders in Europe. Its policies on innovation has led to the substantial growth Nokia Corporation that has become one of the leading telecommunication companies in the world and <https://assignbuster.com/economic-development/>



its development has also led to the success of Finland Economy. In 1970s and 1980s, Finnish government launched the development R ; D cooperation and programs to modernise the university system; the purpose was to improve science and technology and to create more jobs and the development of information technology, the (Peter, Susan.

2003. P. 77). Additionally, Finnish government launched a program called Technical Research Center of Finland in 1972, this was to develop technical oriented research program in the country. There was also a substantial support for the Finnish firms, the government in collaboration of Bank of Finland disbursed R ; D loans and grants for research and development. Thus, in 1980 and 1990s, Finland's innovation policies became more improved than most other industrialized countries. The industrial export rose from 4 percent in 1980s to 11 percent in 90s.

When Finland recovered from recession in 1990s, the government created Science and Technology Policy council of Finland in 1996, the council was to focus on the development of information technology, education and the improvement of R ; D. Between 1997 to 1996, Finnish government spent total amount of 250Million EUR for the funding of research and development and improvement of research in technological sectors, it had also re-organised the Technical Research Center of Finland (VTT) in 1972 . (Peter, Susan. 2003. P. 79)

FIG 3: FINLAND INNOVATION CHARTS IN 2007(PRO INNO EUROPE) The chart above reveals the innovation performances of Finland in 2007. The information from the chart reveals that Finland ranks as one the most innovative country in the EU and is among the group of country that is <https://assignbuster.com/economic-development/>

leading in innovations. Finland is also among the top three EU countries in the improvement of Innovation Drivers, Knowledge Creation and Applications and it is among the top three European countries that lead in innovation of Tertiary education, Public and business R; D expenditures.

The country is also leading in the innovation of Early-stage venture capital, and patenting but its performances but is weak in Intellectual Property where it is below EU average. (PRO INNO EUROPE) UK INNOVATION POLICIES The UK policy of innovations has been very encouraging since the conservative government came to power in 1979. In the 1980s, UK government actively embarked on the policies to develop R ; D and the growth of British companies. In the 1980s, the British government granted Nissan the total amount of ? 112million for its plant in Sunderland, Toyota also received almost ?

75million for the development of its plant in Derby. Other companies that received grant from British government were Ford, who got the total amount of ? 80million in the 1990s. Additionally, Lucky Gold was given the grant worth 248million in 1998 for its engine plant in South Wales. (Peter, Susan. 2003. P. 17). Thus, the stance of innovation policies the British government took from 1979 took a fruitful reward in 90s because UK became the second largest recipient of foreign investment in the world. (Peter, Susan. 2003. P. 17) in 1990s.

The 2007 UK innovation chart below shows that UK has become one of the innovation leaders in Europe, its overall performance is above EU average in its performances on Innovation and Entrepreneurship. Additionally, its performance is relatively average in Intellectual property but below average

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in intellectual average output. FIG 4: UK INNOVATION PERFORMANCE IN 2007 (PRO INNO EUROPE) TABLE 1: DIFFERENCE BETWEEN EU-US INNOVATION PERFORMANCE. (PRO INNO EUROPE) EU US INNOVATION DRIVERS 1. 1 S; E graduates 12. 9 10. 6 1. 2 Tertiary education 23. 0 39. 0 1. 3 Broadband penetration rate 14.

8 18. 0 KNOWLEDGE CREATION 2. 1 Public R; D expenditures 0. 65 0. 69 2. 2 Business R; D expenditures 1. 17 1. 87 2. 3 Share of medium-high/high-tech R; D 85. 2 89. 9 INNOVATION ; ENTREPRENEURSHIP 3. 4 Early-stage venture capital 0. 022 0. 035 3. 5 ICT expenditures 6. 4 6. 7 APPLICATIONS 4. 2 High-tech exports 16. 7 26. 1 4. 5 Employment in medium-high/high-tech manufacturing 6. 63 3. 84 INTELLECTUAL PROPERTY 5. 1 EPO patents 128. 0 167. 6 5. 2 USPTO patents 49. 2 273. 7 5. 3 Triad patents 19. 6 33. 9 5. 4 Community trademarks 108. 2 33. 6 5. 5 Community designs 109.

4 17. 5 The data in Table 1 shows 15 indicators with full data of US and EU innovation performances. The data shows that EU scores above the US in 4 indicators while US performs than the EU in 11. The (S; E graduates, employment in medium-high and high-tech manufacturing, community trademarks and community designs) are the indicators where EU performs better than US. Although the US is leading in 11 indicators, on 9 of these indicators the US is outperformed by at least one European country. Only in tertiary education and USPTO patents the US is performing better than any European country.

(PRO INNO EUROPE) IP REGULATIONS IN EUROPE AND US. United States government created United States Patent and Trade office to protect the private and government organisations from counterfeiting. Patent grants an <https://assignbuster.com/economic-development/>

inventor the right to exclude others from producing the identical products he invented for limited period. The first patent law enacted in the United States was in 1790 and from time to time, the congress has enacted various laws related to patent. For example, American Inventors Protection Act (AIPA) was enacted in November 29, 1999.

Thus, Federal agency charged with administering of patent laws is the Patent and Trademark Office. The patent right in the United States are categorised in three ways: Design patents, plant patents or Utility patents. (Harvard). With present ICT-related inventions and changing technology, there is now ever expanding understanding of what constitutes human made products. U. S. and most countries in Europe is currently the member of European Patent convention. United States also enacted Copyright Act in 1976; the acts give protection to the authors of Literary work, artistical work, musical.

The protection is also available to both published and non-published works other intellectual property. The copyright laws have gone further to protect architectural design, motion pictures, softwares, work of graphic artists and sound recordings. The 1976 Copyright Act generally gives copyright's owner the exclusive right to do or authorise others to reproduce the work in copies or phonorecords or prepare derivative works based upon the work, distribute copies or phonorecords of the work to the public by sale or other transfer of ownership, or by rental, lease, or lending.

The copyright also gives the right of copyright owner to perform the work publicly, in the case of literary, musical, dramatic, and choreographic works, pantomimes, and motion pictures and other audiovisual works (Harvard) Additionally, the act also give the rights to the owner to display the work

publicly, in the case of literary, musical, dramatic, and choreographic works, pantomimes, and pictorial, graphic, or sculptural works, including the individual images of a motion picture or other audiovisual work.

The right goes further by allowing the owner to perform the work publicly by means of a digital audio transmission in the case of sound recordings. In United States, It is illegal for anyone to violate any of the rights provided by the copyright law. Trademarks in the United States are generally distinctive pictures, symbols or words that sellers affix to their products to distinguish their products from other products. Trademark status may also be granted to unique packaging, color combinations, building designs and product styles.

The purpose trademarks are to distinguish products of a firm from products of another. For example, the Trademark Samsung computer or other products manufactured by Samsung distinguishes products from the products manufactured by Dell. In the United states Trademarks are protected by Federal Statute under the Lanham Act and States' Statutory or Common law. The first trademark law enacted in United States was in 1800. Another trademark law enacted was in 1946 and the law was recently amended in 1996 an infringement of trademark law is punishable by law. (Harvard)

Countries in Europe also have different offices to protect the Intellectual property and enforce the IP regulations. In UK, Intellectual Property Office in UK is to guide against willful trademark infringement and copyright counterfeiting. UK government has realised that the country is losing both money and economy knowledge from breaking IP regulations and business <https://assignbuster.com/economic-development/>

organisations are yearly losing money from piracy and copyright infringement. Meanwhile, UK government has adopted various measures in the protection of individual and organisation from copyright infringement.

Copyright office in Finland is attached to the Ministry of Education and the Copyright office in Finland is charged to protect and promote intellectual creation in its different forms. The office recognises the right of individuals to control the use of their works. The legislation guiding the IP in Finland came into force in 1960 under the Finnish Copyright Act (404/1961). The Copyright Act protects works of Finnish citizens. (WIPO) Other legislations that protect IP in Finland are the Berne Convention of 1886. The convention protects the literary and artistic works of individual and organisations.

Thus, Finland ratified the Paris Act of the Berne Convention in 1986. Legislation that is protecting the copyright in Finland was amended in 2005, this is to meet the demand of internet and telecommunication industry, thus the amendments to the Copyright Act and the amended section 49 of the Criminal Code came into force from the beginning of 2006. (WIPO) In Belgium, Copyright office is under the Ministry of Justice and Department of Civic Affairs while the Ministry of Economic Affairs Administration of Trade Policy is in charge of protection of inventions, trademark, copyrights and related rights.

Other office created by Belgium government for the protection of Intellectual property is Benelux Office for Intellectual Property. The office is also to guide against the infringement of Copyright, Trademark and Patent rights. To further protect its citizens against IP infringement, Belgium, government recognises the following conventions: Firstly, Belgium is a signatory member <https://assignbuster.com/economic-development/>

of the convention on the Unification of certain elements of the law of patents, signed in Strasbourg on November 27, 1963.

Belgium government is also a signatory member of the Cooperation Treaty patent and Regulations, made in Washington on June 19, 1970. Belgium is also a member of Convention on the Grant of European Patents (EPC), Regulations and four protocols, made in Munich on October 5, 1973 Finally, Belgium is a member of European Patent Convention for the Common Market (Community Patent Convention), and Regulations made in Luxembourg on December 15, 1975. (WIPO) EU- U. S. POLICIES ON R; D, HIGHER EDUCATION AND SCIENCE POLICIES

United States spends billions of dollars yearly in the promotion of research and development, Higher education and science policies. Table 1 above shows the performance of United States to the policies of Higher education in 2007. The total US performance on tertiary education shows that US is ahead of Europe in innovation on higher education. US scores 39 on higher education policies while Europe scores 23. The table 2 below also shows the updated information of Federal government obligations for research and development and R ; D plant from FY1990 to FY 2007.

In 1990, U. S. expenditure on research was \$11. 2 billions and in 2007, its expenditure has increased and has reached \$28. 2 billions. The U. S. government expenditure on Development was \$41billion in 1990 and reached \$57. 7 billions in 2007 . In 1990; federal government expenditure on R; D plant was \$2. 2billion and increased to \$3. 5 billion dollars in 2007. Thus the total government expenditures on all R; D and R; D plants was \$65. 8

billions in 1990 but increased to \$116.7 in 2007. In Europe, R; D performances are below the U. S. performance Table1 shows that U. S.

is ahead of Europe in Knowledge creations: Public R; D expenditures, Business R; D expenditures, Share medium, and high Tech R; D. From all indications, there is gap in EU-US innovation policies on expenditures of EU-US on tertiary education, business R; D, medium-high and high-tech manufacturing R; D. Due to increasing gap between US, it is recommended that the EU should increase funds for basic research and development . They should copy United States by creating an agency that is similar to the National Science Foundation. In addition, there should be a reform in the higher education and industrial policy.

European government should release more funds to the development of higher education in their respective countries for research in science and technology. Table 2: U. S. EXPENDITURES ON R; D BETWEEN 1990 TO 2007(NSF) REFERENCES Claus Weyrich (1998). The meaning of Innovation - Management Commentary-Industrial Trend or Event-Column. bBNET . P. 1. Retrieved March 25, 2008 From Bbnet database. Johan Hauknes. (1998). Dynamic innovation systems. Do service have role to play? STEP group. p. 11. Retrieved March 25, 2008 From STEP GROUP database.

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