



REVIEW ON GREEK ECONOMIC RECESSION IN 2010 AND THE PROPER BUSINESS STRATEGY

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Abstract: *The global financial crisis brings the greek reality under siege in every field. The economic state gets worse for the public sector and as a result follows the private capital. The social cohesion of the population has been disturbed and the unity in Europe is in real danger. The European currency loses strength against its main rivals. The answer to the current and the future situation is innovation. Mass Customization and Open Innovation strategy is a unique opportunity for the people to establish it, not only as customers but also as inventors. A unified function among customers, marketers, engineers, manufacturers, retailers in the holistic approach of a supply chain can contribute to create the new era of economy. Living Labs could be the fundamental initiators for developing new markets for the evolving social production system. The recovery of the greek economy can offer a paradigm for the recovery of the European Economy.*

Key Words: *Economic recession, Mass Customization, Open Innovation, Living Labs, Economic Recovery, Central European Region.*

1. INTRODUCTION

The opportunities for business activities standing on the Business Strategies of Mass Customization, Personalization, Open Innovation and Customer Driven Value Creation which are decoupling in the current paper. The purpose is to enhance the scientists, investors and customers to believe in the specific strategies. Scientists can develop new tools and applications for the customers and the investors can support this effort. The financial crisis leads to another layer and form of the known capitalism due to the fact that societies and the needs of the people continuously change. This change is noted by the customers and they can be the innovators who design and produce their products derived from their needs. The current state describes the productivity and other significant indicators of the greek society. The Business Strategy of Tomorrow includes the gears of innovation and prosperity while implementing a balanced

connection among the Business Strategies of Mass Customization, Personalization, Open Innovation and Customer Driven Value Creation.

2. CURRENT STATE (ECONOMIC RECESSION 2010)

2.1. Cost index for the factors of agricultural and livestock production : 2009 [1]

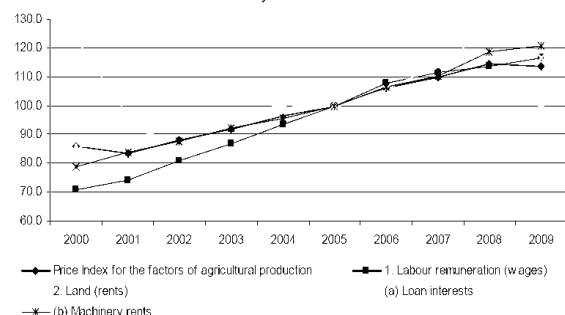
The Hellenic Statistical Authority announces the Annual Cost Index for the factors of agricultural and livestock production, with base year 2005.

The change of the General Cost Index for the factors of agricultural and livestock production, for the year 2009, is presented as follows:

The General Index in 2009, compared with 2008 decreased by 0.7%. The previous year the index increased by 4.1%.

The Cost Index for the factors of agricultural and livestock production in 2009, compared with 2008, decreased by 0.7%, due to the changes of the main groups, as following:

- Labour remuneration index increased by 2.5%.
- Land cost index (land rents), decreased by 1.5%.
- Capital charges index decreased by 3.6%.
- a) Interest index decreased by 7.7%.
- b) Machinery rents Index increased by 1.9%.



Graph 1. Annual price index for the factors of agricultural and livestock production

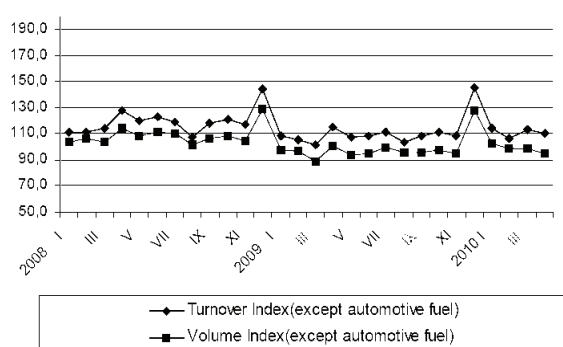
2.2. Turnover index in retail trade: April 2010 [2]

According to the provisional results, the turnover index in retail trade as it was published until December 2008, except automotive fuel, in April 2010 as compared to April 2009, recorded a fall of 4.1% at current prices (in nominal terms).

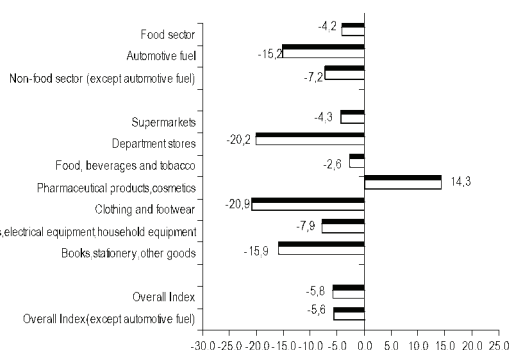
Accordingly the turnover index in retail trade, including automotive fuel, in April 2010 as compared to April 2009, recorded a fall of 0.4%.

The volume of retail trade (i.e. turnover in retail trade at constant prices) as it was published until December 2008, except automotive fuel, decreased by 5.6% in April 2010, as compared to April 2009.

Accordingly, the retail trade volume index, including automotive fuel, in April 2010 as compared to April 2009 was decreased by 5.8%.



Graph 2. Evolution of Turnover Index and Volume Index in Retail Trade



Graph 3. Annual rates of change (%) of the volume index in retail trade, between April 2009 and April 2010

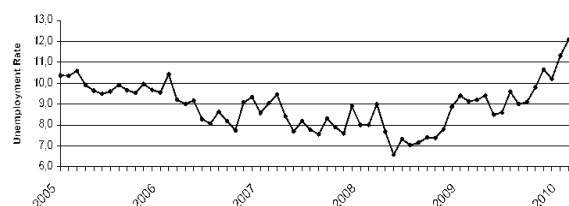
The purpose of the Retail Trade Turnover Index is to show the performance of the goods and services market. Turnover comprises the total amounts invoiced by the enterprise during the reference period, which correspond to the resale of goods without any further transformation. The data collected each month refer to sales effected (both retail and wholesale), excluding VAT but including other duties and taxes on the goods. The survey covers the whole Greece, with data from 49 prefectures. In the survey for the compilation of the revised Retail Trade Turnover Index, it was decided to include 38,347 retail trade enterprises listed in the Business Register, having an annual turnover (in 2005) equal to or higher than 200,000 € from which a random sample of 1,609 enterprises was therefore selected.

2.3. Labour force survey: March 2010 [3]

Unemployment rate in March 2010 was 11.6% compared to 9.2% in March 2009 and 12.1% in February 2010. The number of employed amounted to 4,423,899 persons while the number of unemployed amounted to 578,723 and the number of inactive to 4,292,663.

The number of employed decreased by 65,773 persons compared to March 2009 (a 1.5% rate of decrease) and increased by 19,848 persons compared to February 2010 (a 0.5% rate of increase).

Unemployed increased by 121,699 persons (a 26.6% rate of increase) compared to March 2009 and decreased by 26,554 persons compared to February 2010 (a 4.4% rate of increase).



Graph 4. Unemployment rate by month (January 2005 – March 2010)

Labour Force Survey produces early estimates since 1981 (second quarter of the Force year). Since 1998 is a continuous quarterly survey. The main statistical objectives of Labour Force Survey is to divide the population of working age (15 years and above) into three mutually exclusive and exhaustive groups - persons in employment, unemployed persons and inactive persons. In addition Labour Force Survey collects information on demographic characteristics, on main job characteristics, on the existence and characteristics of second job, on educational attainment, on participation in education, on previous working experience and on search of job.

Employed are persons aged 15 years or older who during the reference week had worked even for just one hour, for pay or profit or they have worked in the family business, or they were not at work but had a job or business from which they were temporarily absent.

Unemployed are persons aged 15-74 who were without work during the reference week (they were not classified as employed), were currently available for work and were either actively seeking work in the past four weeks or had already found a job to start within the next three months. Inactive are those persons who neither classified as employed nor as unemployed.

Economically active population (labour force) are persons that either employed or unemployed.

Unemployment Rate: Is the ratio of unemployed divided by total labour force.

2.4. Commercial transactions of greece (estimations): May 2010 [4]

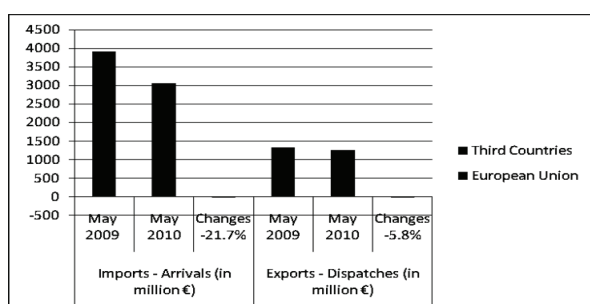
The total value of imports-arrivals in May 2010 amounted to 3,063.5 million € in comparison with 3,914.1 million € in May 2009, recording a drop of 21.7%.

The total value of imports-arrivals for the 12-month period from June 2009 to May 2010 decreased by 19.2% compared with the corresponding 12-month period from June 2008 to May 2009.

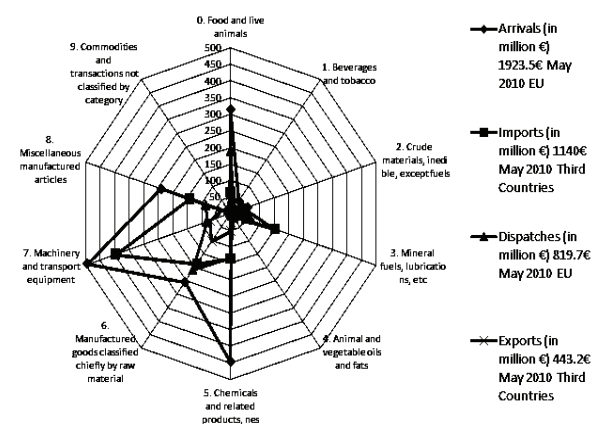
The total value of exports-dispatches in May 2010 amounted to 1,262.9 million € in comparison with 1,340.2 million € in May 2009, recording a drop of 5.8%.

The total value of exports-dispatches for the 12-month period from June 2009 to May 2010 decreased by 11.7% compared with the corresponding 12-month period from June 2008 to May 2009.

It should be pointed out that the above-mentioned data concern only the commercial transactions and not the transactions of services or the non registered transactions. Nevertheless, these two categories of transactions along with the commercial transactions are taken into account for the compilation of the tables of the National Accounts.



Graph 5. Imports - Arrivals and Exports – Dispatches



Graph 6. SITC sections (Standard International Trade Classification)

The Commercial Transactions of Greece are recorded on a monthly basis aiming at monitoring the total value of Imports-Arrivals, Exports-Dispatches as well as the changes on a percentage basis of the above-mentioned categories, 40 days after the end of the reference month (Estimations).

INTRASTAT is the system for collecting Intra EU statistical data (among the countries of the EU). It was implemented on January 1st, 1993.

Arrival is considered every import of goods from a country of the EU.

Dispatch is considered every export of goods to a country of the EU.

EXTRASTAT is the system for collecting external trade statistical data (with the countries outside the EU).

Import is considered every import of goods from a third country (outside the EU). Export is considered every export of goods to a third country (outside the EU).

INTRASTAT: It is an inventory statistical survey. The parties responsible for providing information through the Intrastat System are all the enterprises having exceeded the statistical thresholds, which are in effect for the running year. The statistical thresholds are readjusted by the Hellenic Statistical Authority, every year. The percentage of coverage ranges between 97 and 99%.

The thresholds of adjustment for 2010 are the following:

Arrivals: € 130,000.00 (98% coverage).

Dispatches: € 95,000.00 (98% coverage).

EXTRASTAT: It is a statistical survey where data are collected by administrative sources. All the transactions above the amount of 1,000 € are registered. The Customs Authorities of the country collect the statistical data on trade filling in the Single Administrative Document (SAD). In the beginning of each month they send to the Hellenic Statistical Authority an electronic file with the statistical data of the previous month.

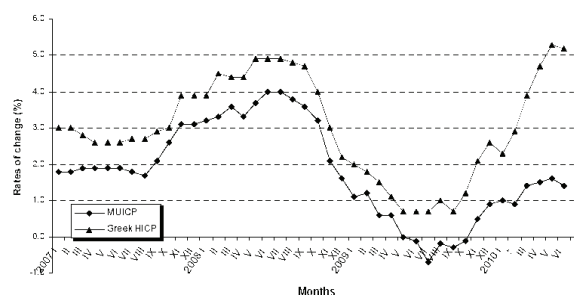
Classification of goods: The goods are classified in compliance with the 8 digit Combined Nomenclature Code (CN/8) and the Standard International Trade Classification (SITC).

2.5. Harmonized index of consumer prices: june 2010 [5]

The Harmonized Index of Consumer Prices (HICP) in June 2010, as compared to June 2009, increased by 5.2%. A year earlier, the annual rate of change of the HICP was 0.7%.

The HICP in June 2010, as compared to May 2010, decreased by 0.2%. A year earlier, the monthly rate of change of the HICP was -0.1%.

In the twelve month period July 09 – June 10 the annual average rate of change of the HICP was 2.7%. A year earlier, the annual average rate of change of the HICP was 2.6%.



Graph 7. Annual rates of change (%) of the Harmonized Index of Consumers Prices (HICP) in Euro zone (MUICP) and Greece

Harmonized Index of Consumer Prices (HICP), is compiled in Greece by the Hellenic Statistical Authority (ELSTAT), in parallel to the national Consumer Price Index, since 1996.

The HICP covers all consumption expenditures which take place on the economic territory of Greece,

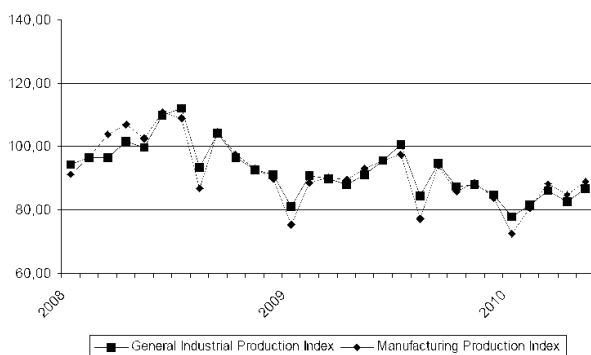
independently of the category of consumer, while the national CPI covers the consumption expenditures, which take place on the economic territory of Greece and abroad, of the private households only.

The Harmonized Indices of Consumer Prices (HICPs) are compiled by the Member States of E.U. in accordance to EC Regulations, in order to provide comparable data for the international inflation comparisons and, in particular, for the assessment of the convergence criterion, of price stability, in the frame of the European Monetary Union (EMU) requirements. The HICPs are the basis for compiling the European Index of Consumer Prices (EICP) and the Monetary Union Index of Consumer Prices (MUICP), which provide the official measures of inflation in the EU27 and the Euro-zone (16 Member States), respectively.

2.6. Production index in industry: May 2010 [6]

The Production Index in Industry (IPI) in May 2010 compared with May 2009 recorded a fall of 4.9%. A year ago, the annual rate of change of the IPI was -8.6%.

In the 5-month period January 2010 – May 2010, the average rate of change of the IPI was -6.0%. A year ago, the corresponding average rate of change of the IPI was -9.7%.



Graph 8. Evolution of the Industrial Production Index and the Manufacturing Production Index

The IPI in the 5-month period January - May 2010, compared with the period January - May 2009, decreased by 6.0% due to the 5-month average rates of change of the sub-indices of the industrial sections:

- Mining and quarrying production fell by 5.0%.
- Manufacturing production fell by 4.8%.
- Electricity production fell by 10.8%.
- Water supply production rose by 1.3%.

The Industrial Production Index (IPI) has been compiled since 1959.

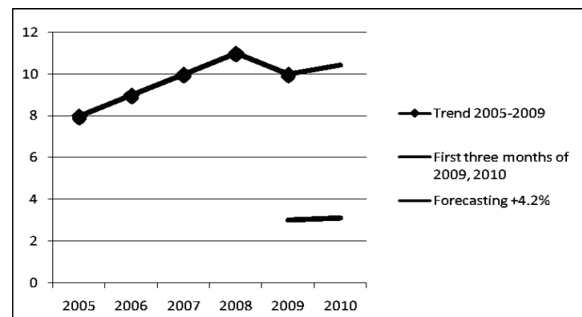
The IPI is an important business cycle indicator, which shows the monthly activity in the Mining-Quarrying, Manufacturing, Electricity and Water Supply sectors. A more specific object of the Industrial Production Index is to compare the magnitude (volume) of the current month's output at any given time with the corresponding figure for a given base period. The IPI shows the evolution of value added, at factor cost, of production, at constant prices. The survey covers the whole country.

The survey covers all the sections of industry, the main industrial groups, all the levels of economic activities (divisions, groups, classes) and the level of products.

The data are collected from a sample of 1,468 enterprises. The survey covers a total of 349 products and the measurement of the surveyed products is made in terms of output quantities or in terms of production value or turnover, according to the specific situation in each branch of economic activity.

2.7. The official innovation activity [7]

According to the Industrial Property Organization in Greece which is the official authority for the patent certification, the trend of innovation in Greece was growing rapidly from 2005 to 2008, like in Europe. The next year of 2009, Europe faced a reduction of 13.1%, namely that 7,840 less patents and the trend in Greece was the same. During the first three months of 2010, there is an increase of 4.2% compared to the first three months of 2009 in Greece. It is an expression of encouragement for the future trend of innovation in the middle of the economic crisis.



Graph 9. The trend of innovation from 2005 to first three months of 2010

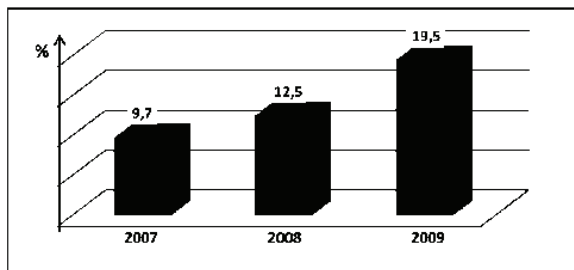
The number of the official certified greek patents in 2009 was 720, the 576 of them came from individual inventors (considering everyone, also employees), the 129 from corporations, 12 from universities as institutions and 3 from research authorities.

2.8. People's voice [8]

The Economic Chamber of Greece and the Athens University of Economics conducted a survey capturing the opinion of the greek citizens during the first three months of the year 2010. It was the red period of the insolvency and the start point of the European established measures against the financial European crisis. The research regarded the citizens, not only as earners, but also as consumers and customers. The first touch of the situation is apprehensive concerning the debt amount of the bad checks and the unsettled bills of exchange. The amount for the first two months of the year 2010 is about 215,189,755€ and the trend is on the increase. As a matter of fact, the market faces lack of cash due to the financial crisis.

More of the loans are for building or buying houses and the 6.9% of them is unsettled or in arrears. The trend is unpredictable according to the survey. The rise of the unemployment and the austerity will probably exacerbate

the situation. The other sort of unsettled and in arrear loans are for consuming purposes. According to the Bank of Greece the percentage is 11.7 and seems to be on the increase. The summary of the amount is 19.5% of the total unsettled or in arrear loans and the trend is not only unpredictable but also augmentative. An estimation foresees reaching the amount of the 25 € billions at the end of the year 2010.



Graph 10. *The total unsettled or in arrear loans*

The prices of the daily goods in local market go up with a rapid way. The highest rates of increase are pointed out below; most of them are relevant to petroleum products.

Table 1. *The highest increased rates of daily goods price*

Car fuel	50.9%
Heating oil	39.2%
Intercity trains transportation	36.6%
Taxicab services	28.6%
Toll and vehicle taxes	28.4%
Transportation insurance services	18%
Telecommunication and mobile services	9.2%

There is a rising in 35 out of the 44 basic product and service categories.

The 20% of the households have already reached the borderline of the poverty and their income is only the 60% of the average household income, which is the amount of the 12,852€ per year. The 33% of the poor people are under 65 years old. But the wealthier 20% of household income is about five times higher than the poorer 20% of household income.

To sum up with the people's voice concerning the current survey of the Chamber of Greece and the Athens University of Economics, the financial and the economic situation of the society is under a serious suffering. The people's belief for their future economic state is mostly pessimistic. The greater part of the society faces economic problems and this fact switches the situation to customer problems. As a result, the customer problems are also business problems, mostly for Small and Medium Enterprises. The SMEs and any company which stands on the brink search for solutions in order to satisfy the market needs. These solutions could be in alternative business strategies, such as Open Innovation, Mass Customization and Customer Driven Value Creation Processes.

3. BUSINESS STRATEGY OF TOMORROW

"Innovation is usually created by individuals or groups of individuals within organizations and it is significant to understand the source of innovation. A potential source of innovations comes from those individuals that use product in their work or home life. Such users may innovate for their own direct utility as has been established by Eric von Hippel, 1988, 2005. Users may let their innovations go undiscovered, or may seek to profit from them, in other cases they have rational reasons for freely revealing their incremental contribution to the firm that supply the relevant technology". [9]

"Open innovation is the use of purposive inflows and outflows of knowledge to accelerate internal innovation, and expand the markets for external use of innovation, respectively. This paradigm assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as they look to advance their technology". [10]

"Mass Customization is the new frontier in business competition for both manufacturing and service industries. At its core is a tremendous increase in variety and customization without a corresponding increase in costs. At its limit, it is the mass production of individually customized goods and services. At its best, it provides strategic advantage and economic value". [11]

"The proposed solutions for this business model should dynamically generate flexible manufacturing systems particular tailored for the customer demand, customer driven value creation processes". [12]

"From capturing the desire of the customers by using IT tools – configurators to implementing agility in the Supply Chain Processes is a business model of Mass Customization and Personalization and more specific a customer driven value creation". [13]

Establishing the culture of Open Innovation in order to sustain the willing of development through the cooperation among the innovators and the investors could enhance any possible high rates of development. The customers, so the innovators and the investors could not face the satisfactory of their needs on their own. They could make their personalized products because the appropriate technology would be based on Customer Value Creation tolls. The cost of the business could reach the efficiency of Mass Production through the new imperative economy of scope business model of Mass Customization. The great variety of customer driven customized products can be even more efficient than the great number of mass produced products. An organization, as an institute, can be the implementation solution for the business strategies. Living Labs, as the interface between customer's needs and manufacturer's capabilities can be functioned by independent engineers and scientists. [14][15][16][17]

4. CONCLUSION

The trend of all production indicators is shaped by a descent, at least for 2010 and anticipates also the same conduct for 2011. The agricultural, the livestock, the general industrial and the manufacturing production, the retail trade and the total commercial transactions tumble.

On the other hand, the unemployment and the inflation continuously increase. The positive rates go down and the negative go up. The unusual situation is noted in the innovation activity which seems to be positive during the years of the economic recession. The current state can be displayed by the following figure 1. The negative factors rise to the negative position and the positive factors seem to be stable. The innovation maps out a slope towards the positive factors with a small rate of development and evolution. The innovation activity lives with the small rise of itself, although the current situation of the economic factors shows a deficit for the prosperity of the future demand. Innovation activity probably will not be able to satisfy the upcoming demand, due to the fact that its rate is insufficient.

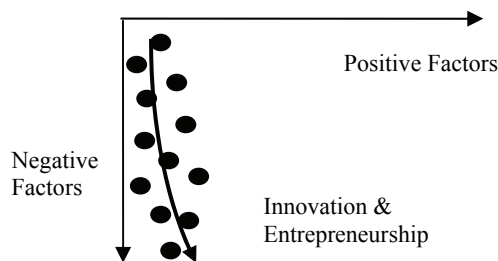


Fig. 1. Conceptual current state of innovation activity

The support for the boosting of this phenomenon would be the best solution for any kind of economic crisis in any society. When economic indicators fall, the innovation can be supported by business strategies, such as Open Innovation [18], Mass Customization and Personalization [19] and Customer Driven Value Creation [20]. The innovation activity could be more prosperous from the current situation, satisfying the demand [21]. The use of the business strategies could decrease the rate fall of the negative factors and ignite the positive factors to augmentation and prosperity [22]. According to the current financial system [23], after many years the negative factors will be increased again, but not with the same rate as the current situation. The following figure 2 displays the change of innovation towards the positive factors evolution, sustaining the negative factors in a stable state and eventually creates a small slope towards the negative factors after years.

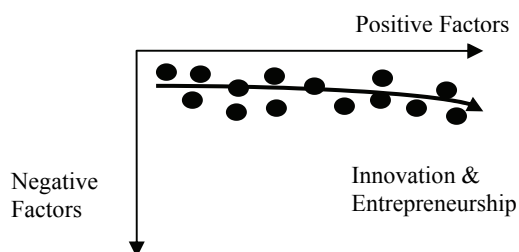


Fig. 2. Conceptual gears of Business Strategy through Living Labs

5. ACKNOWLEDGEMENTS

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