



## WHAT IS INNOVATION?

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In the earlier half of the 20<sup>th</sup> century, Joseph Schumpeter popularized the term ‘creative destruction’. It describes how entrepreneurial forces in a free market mutilate established structures, processes, and products and apply their new creations to a market. Innovation, in the Schumpeterian sense, is not limited to invention – but arises at the point of diffusion. Therefore, accommodating implementation is as important as facilitation of invention. Argued in this essay, innovation can present itself beyond machinery and products. Change is to be had on organisational levels - like interactions between government and business, and recruitment processes. Furthermore, while innovation creates economic growth, it is also a main driver in solving global demands for sustainable solutions. It is not so much necessary in V12 engine production, deep-sea oil drilling, and city-centre fracking. But rather, there is a screaming demand for innovation in sustainable and environmentally friendly solutions.

Temperatures are being broken around the globe, and the climate is growing more unstable by the year. Glaciers are melting and sea-levels rising. Environmentally friendly innovation is one of the biggest challenges the world has ever seen to date. Therefore, in this essay, I am going to discuss concrete suggestions for how entrepreneurs and governments can foster innovation and guide it in an eco-friendly direction. I will begin by outlining steps for entrepreneurial firms, after which I will discuss the public sector on both local and global levels. Through a fine balance between cooperation and competition, I believe that innovation levels can be pushed even further than their current state.

## GROUND FLOOR - ENTREPRENEURS

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Beginning at the roots of innovation – the entrepreneur envisions the technology of tomorrow and brings it into fruition. For entrepreneurs I propose three steps to be taken to promote innovation – flatten corporate cultures, re-think hiring processes, and compete in social responsibility.

### FLAT CORPORATE CULTURE – LET IDEAS FLOW

Where ideas can freely flow, and individual creativity is accommodated for – innovation will foster. The value of flat corporate structures is something I can personally testify for. Via good relationships in the firm, I was able to have impact on processes and routines at a fast food restaurant where I was employed. While this might not seem as earth-shattering levels of innovation; imagine similar structures at an energy firm where a junior engineer might carry ideas which can help to solve global issues on renewables. Entrepreneurs should seek to innovate the traditional firm hierarchy and build a management structure where ideas can flow; from bottom to top – like hot water in a boiling pot. This will promote innovation from within the firm.

## **INNOVATE YOUR RECRUITMENT PROCESS AND YOUR BUSINESS WILL FOLLOW**

Recognizing the value of young and fresh minds; allowing visionary and creative juniors to develop and grow, can help entrepreneurs keep a firm innovative. Such talent can be sought through an innovation of recruiting processes. Traditionally, a selected few students are invited to undertake internship programmes. Those who are deemed talented enough are offered long-term stays at the firm. I argue that through a more pro-active recruiting process, a firm can more effectively find talent - and potential innovators. By engaging directly with young adults and teenagers, firms can capture otherwise neglected talent. Workshops, competitions, school-events in rural or vulnerable areas, diversity schemes, scholarships, and much more can be used to capture interests and lift those bright minds who would otherwise not reach their potential due to surrounding circumstances. Many imaginative young innovators and entrepreneurs do not have the prerequisites to independently chase their dreams.

## **DO NOT UNDERESTIMATE THE VALUE OF UNDERTAKING A SOCIAL RESPONSIBILITY**

On her land, my Mother has a small pen for free-range chickens, where, from time-to-time her neighbours purchase eggs. It is a much-preferred alternative to supporting unethical antibiotic-ridden chicken farms. Similarly, when phone manufacturers innovate their materials to use recycled materials, when firms choose to run all their processes on renewable energy sources – consumers notice. Buying a phone, knowing that it was produced by minimizing environmental impact, is a much-preferred alternative for the consumer. Therefore, I wish to highlight the value of which eco-innovation has, not just towards the globe, but to oneself as a for-profit firm. By self-imposing eco-standards as a measure of product differentiation, firms make social responsibility, innovation, and revenue work simultaneously.

## **FIRST FLOOR – LOCAL GOVERNMENT**

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Government's primary role in the process of innovation is to create an environment where entrepreneurial spirits and competitive minds can flourish and push each other towards new horizons. Standing on the outside, overlooking the innovative landscape, government acts to aide and direct entrepreneurs towards necessary progress.

## **INNOVATE THE WAY LOCAL BUSINESSES INTERACT WITH EACH OTHER THROUGH GOVERNMENT**

My home municipality of Sotenäs (Sweden) are famous, both domestically and internationally, for their innovative approach to local sustainable solutions. Consisting of coastal towns, the municipality has focused on developing resourcefulness and innovation among local entrepreneurs. Primarily those engaged in sea- and aquatic activity. Through what they call the 'symbiotic centre', the small municipality of barely ten thousand people has become a staple for the rest of the country in innovative solutions for self-sustainability. Via the centre, local salmon-farmers and energy producers are connected, using the rest products of the fish to produce biogases. Furthermore, the fertile sweet-water is utilized by local vegetable farmers. Together with the entrepreneurs, the centre also conducts research to further innovate processes, and find more opportunities for symbiosis. This is a concrete example of how a local government can work to promote innovation. By innovating the way local businesses interact, municipalities (and other local government) can promote sustainability. The

smaller businesses are often more risk averse than larger corporations and are thus less likely to be as innovative. Therefore, local governments should help to facilitate a symbiotic relationship among its businesses. For example, in remote towns where goods must be shipped great distances – facilitating group imports would be a solution offered by governments.

To create a local symbiosis is an innovation in-itself. An innovation by government which yields further innovations from entrepreneurs.

## **SECOND FLOOR – FEDERAL AND MULTINATIONAL GOVERNMENT**

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As global actors, federal governments and the government of a political union, carry a responsibility to promote innovation on both domestic and global fronts. Sustainability is a global issue, and only through global cooperation and competition can it be resolved.

### **COOPERATE FOR HEALTHY COMPETITION – TRADE AND INVESTMENT**

The global climate is grower warmer, yet, the trading climate is successively growing colder. Much like a flower, innovation stifles and shrinks when harsh frosty winds blow, and it flourishes in warm and accommodating environments. When the sun is rich with vitamins and photons; when the bees are busy spreading pollen; when the ground is rich with nutrients and water – when all parts of nature work together, the flower can grow. Just like the flower needs nature, innovation needs nations to work together.

To innovation, there exists a process of trial and error where firms take several tries to develop new innovations. The cost of such undertakings can, through open trade and investment paths, be reduced – thus, increasing the number of trials undertaken by the entrepreneur. This is but one of the many innovation-boosting factors which trade provides. Open trade offers entrepreneurs a chance of being introduced to new markets, and its benefits to innovation are many. Among the primary benefits are: (1) Economies of scale – The entrepreneur can offer their product on a wider global market, exposing themselves to further revenue which makes R&D expenditure a more worthwhile affair. (2) Competition – Opening up investment and trade paths will create competition on a global scale. A healthy level of it will incentivise firms to innovation as to gain a competitive advantage. Technology-heavy industries (like sustainable solutions) are sensitive to competition – if there is a lack of it, incentives to innovation fall. (3) Access to new technology – By engaging in global trade, technological transfers are streamlined across the globe, and for example, spill-overs into other industries (which operate mainly in other parts of the world) can occur (Onodera; 2008).

To the innovation and implementation of sustainable technologies, open trade and investment becomes imperative to protect. The World Bank has found that the removal of tariffs and non-tariff barriers on the basic energy solutions; wind, solar, clean-coal, and efficient lighting, in eighteen high-emission developing nations would result in trade gains of up to 13% (World Bank; 2008). Therefore, I propose that the EU should work to minimize non-tariff barriers to trade, lower global tariffs for goods related to sustainable technologies, accommodate foreign direct investment, and promoting regional specialization which makes use of comparative advantages. Foreign investments in regions

where innovation is cheaper, and more cost effective will not only benefit the respective region financially – but also the world environmentally.

With open trade in a single market and common emission and climate regulations – the European Union houses the most innovative nations of the world. The close cooperation of the member nations has allowed for goods, services, people, and information to flow between them - generating opportunities for innovation. With this in hand, it is imperative that the EU stands up for open trade and opposes protectionism on a global scale. Standing between the East, and the West. Operating on good terms with both sides. The European Union must take a leading role in bringing these giants together – to cooperate for a more sustainable future.

## **INNOVATION THROUGH REGULATION**

Through international agreements like the Paris accords, the EU must promote a straining of environmental regulations on a global stage. According to the ‘Porter Hypothesis’, developed by economist Michael Porter in 1995, tighter environmental regulations can boost efficiency, innovation, and competitiveness. The argument states that; with market-oriented policies like emission taxes and tradeable pollution permits, production inefficiencies can be uncovered and a pressure to innovate is created. Admittedly the profits from such innovations might not fully offset compliance costs in the short-run, however it can be a profitable affair in the long-run. Costs may decrease as inefficiencies are dealt with through compliance.

Empirics show that the Porter Hypothesis carries weight. The desired results hinge on the form of policy and regulation. Like the hypothesis states – positive results can be found where there are flexible and market-based policy decisions, rather than rigid ‘command-and-control regulation’. We can confidently predict that proper policy will bring about environmental innovation. A focus on emission taxes, allowances, and performance standards promotes healthy competition and might cause otherwise risk-averse managers to rethink their R&D strategy. Technology standards on the other hand promotes ageing capital and cynicism towards investment (Ambec, Cohen, Elgie, Lanoie; 2013). Furthermore, policy changes from the latter to the former has proven a beneficial affair for the businesses themselves, reducing compliance costs noticeably (between 40% and 140%). However, the evidence for regulation improving overall business performance is still mixed

I propose that the European Union must work to strengthen international climate conventions. The competitive playing field must be levelled to encourage innovation on a global scale. Self-regulatory measures run at a risk of creating regional pollution havens in countries where the bar is set lower. Possible difficulties of compliance and adaption of innovative technology in e.g. emerging nations should be offset via support as a part of the agreement.

The world must collectively guarantee that regular check-ups on one another, and that outlined sanctions are enforced properly – something which the Paris Agreement lacks. This will promote compliance from international economic actors. Furthermore, foreign goods which do not abide by market-oriented and complete environmental regulations should carry tariffs on them, to incentivise compliance and innovation abroad. Firms within the EU, which overall show high compliance rates, should see tax breaks while non-compliant entrepreneurs should see strong pollution and emission

taxes. Furthermore, I propose that the EU must work diplomatically to keep the US in the Paris Agreement. The United States is the second largest jurisdiction by carbon dioxide emissions - for them to withdraw from the agreement will be a blow to the fight for global sustainable innovation. While the agreement could be improved upon, it would still be a loss for them to go through with their proposal to leave.

## **LET PEOPLE AND IDEAS FLOW BETWEEN NATIONS.**

Intellectual capital must be allowed to freely flow across borders to promote productivity and innovation. It is well documented that innovation is positively correlated with skilled immigration rates (Bosetti, Cattaneo, Verdolini; 2015). And, in times when the value of migration is more questioned than ever, the EU must stand-up for evidence-based policy. Initiatives like the EU Blue Card and research migration rules are positive and should be promoted to be adopted by nations across the world – including the union members Ireland and Denmark. To promote openness, the EU should engage in research exchanges where, under mutual agreements, nations exchange skilled researchers. The objective of such an exchange would be to help nations get accustomed to a more open migration policy.

## **CONCLUSION**

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This essay has highlighted how both cooperation and competition is necessary to foster competition. Entrepreneurs should seek to cooperate along the corporate structure, whilst undertaking a social responsibility and ethical innovation as a competitive advantage. Local governments should seek to facilitate cooperation between small businesses to garner sustainable innovation. On a global level, governments should cooperate through levelling regulatory and competitive playing fields, open trade and investment paths, and allow for the free movement of skilled workers to foster global innovation. Through global cooperation and a healthy global competition, a necessary lift in global innovation can be achieved.

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