Green jobs against crisis: comparing China and the European Union

Context and introduction to green jobs

In an international context where economy growth has become harder to achieve partly because of a weakened purchase power among consumers and other constraints on workers wages, an increased need to bring new ideas of services and products to adapt to these new constraints has been witnessed over the past decade.

While often seen as a constraint for countries and companies, targets to reduce GHG emissions, increase the share of renewable energy and increasing energy efficiency at both residential and industrial facilities can be considered as an opportunity to encourage the development of new of activities and thus create new jobs, most commonly known as "green jobs".

Basically, two types of green jobs exist : **eco-industries** green jobs and **transformation** ones. (2)

Eco-industries green jobs are those practiced in sectors which are green by nature. The purpose of the jobs performed is to directly allow the achievement of one of the goals associated with a country's climate change strategy. These typically revolve around providing green solutions for electricity supply, consulting services for customers to reduce their energy consumption and production optimisation for industries to help achieving energy stewardship goals. Sectors like **software, utilities, business support and services and heavy construction** are the most likely to be impacted by this approach.

Transformation green jobs adopt another approach, starting from the fact that every activity has to follow a « greening » process to help, indirectly this time, achieving the climate change strategy goals. Transformation green jobs are therefore created across different structures from different sectors of activities in order to tackle issues related to energy and water consumption, GHG emissions and biodiversity protection among others for specific production activities, such as **heavy industry and intensive agriculture.**

Green jobs creation approaches in China and the European Union

The top two places where introduction of green jobs is flourishing are **China and the European Union**.

China, the biggest employment market in the world, has a target to peak its GHG emissions by 2030. One of the means of the Chinese government to meet this objective or overachieve it is to prepare its transport and energy segments economy to live in a greener way following the peak.

Thus, Chinese green jobs creation strategy is a mix between both the eco-industries and transformation approaches. For its transport segment, the Chinese economy intends to create an average of 230,000 jobs annually between 2011 and 2020 for its high-speed rail project and 437,000 jobs each year by 2020 for the Beijing's urban rail system. China is also expected to add 220 million new vehicles between now and 2020, with 16.7 million of those being either hybrid or electric vehicles. Regarding the energy segment, the main green jobs creating projects remain the creation of an average of 6,680 direct jobs annually for solar PV industry and 34,000 green jobs annually between 2011 and 2020 for wind power manufacturing and installation industry.

The European Union is considered as the second biggest market for green jobs promotion worldwide. The 2014 European Commission's Industrial Policy Communication established industrial modernisation as a required path of evolution and stressed the need for pursuing this modernisation by investing in innovation, resource efficiency, new technologies, skills and access to finance, accelerated by the use of dedicated EU funds. Labour policies vary a lot from a UE country to another, depending on the type, the scale and the political orientation of each country. As a result, the global 2014-2020 European policy remains vague. It sets up general prescriptions leaving to countries a certain degree of freedom to implement their own mechanisms to achieve their own goals. In addition, the European Union has established a number of tools in order to help its member countries achieve their 2014-2020 objectives. The three main schemes put in place are the European Social Fund (ESF) which co-finances labour market activation measures and measures to smooth the transition to green economy, the Joint Action to Support Micro-Finance Institutions in Europe (JASMINE) which supports the promotion of entrepreneurship, business start-ups and self-employment that could be directed towards green jobs and finally the European Globalisation Adjustment Fund (EGF) that helps manage restructuring processes by co-financing re-skilling and job-search measures. Other resources exist, dedicated to technology upgrade, education fostering and sector-specific training and R&D, but those remain relatively less used than the three mentioned before.

At countries level, the approach differs considerably from a country to another.

A country like France, with an already diversified and developed economy focuses more on developing renewable energy and fostering education throughout already recruited workforce. Indeed, while the growth of employment in renewable energy jobs revolves around 25% per year since 2009, the main step towards green training was the 55% ESF funded DEVINE-VERT project (total cost : EUR 32.4 million) aiming at including environmental training in all National Association for Adult Vocational Training (AFPA).

A country like Ireland has adopted a different approach, by focusing more on creating a new « green sector », which will have its own services and products and its own synergies between clients, suppliers and supervisory bodies. This approach enabled in 2013 through the development agency "Enterprise Ireland" (EI) (which supports indigenous industries), to have 240 export-oriented "cleantech" companies, employing almost 6 000 people. Among these, **OxyMem** who provides **green solutions for wastewater aeration**, and **Wattics** who is active in developing **software solutions** exclusively dedicated to improve **energy efficiency** of companies are among the top success-stories witnessed in this field.

Conclusion: Strengths and weaknesses of each approach

Taking both examples of China and European Union again allows us to figure out how different are the approaches of each economies.

According to the WorldWatch Report, China decided to focus on three pillars plus two major emerging trends. The three pillars are greening energy supply, greening transportation and greening forestry sector. The two emerging trends are : elevating green development to a national strategy and developing a systematic plan for implementation, and emphasizing the importance of sustainable policy implementation and building institutional mechanisms to ensure it. In practice, those choices mean that the Chinese strategy is to elevate each « green job » project to a policy, and being comprehensive and transparent on the potential impacts and costs of each project. (1)

On the other hand, the European Union has adopted a more comprehensive (but less ambitious and direct) approach to tackle the issue. According to the European Commission strategy and state-by-state analysis of the potential for green jobs throughout EU member countries, 6 axis were picked : Development of education, Training and skills to support greener economy, Promoting the development, dissemination and use of green technologies among industry, Enabling investments in green infrastructure and climate change adaptation, Promoting the take-up of green technologies among consumers/household, Shifts in taxation, and Creating awareness of and social pressure for the transition to a greener economy.

When compared, both approaches are complementary, and it is very likely that at some moment one of the approaches will face limits related to the absence of introduction of elements from the other.

In fact, the Chinese approach is oriented towards three main sectors and essentially relies on formalising the introduction of green jobs and its implementation process. However, not much attention was given to ensuring the complementarity of the changes introduced in these sectors to the overall economic situation of the country. In addition, the centralised political system gives little room to local communities consultation procedures and the adaptation of global orientations to local particularities. There is therefore a certain risk that the continuity of the schemes aimed at promoting green jobs would be only pushed by law enforcement and that the sustainability and integration of these newly created jobs becomes a constraint for companies operational efficiency only. (1)

Reversely, the European Union's approach relies more on providing as much tools as possible to each sector actor who might be interested in developing « green jobs », and does not insist on formalising a unified integration framework for all member states. The risk associated with this approach is that the European market approach might lack overall coherence and that the 28 members states advance in different speeds, creating therefore constraints for countries to catch-up, using models and orientations not suiting their real economic display. This has been highlighted by several institutions across the European Union. For instance - in its declaration on industrial policy, energy and the fight against climate change in March 2014 - the ETUC (the European Trade Union Confederation) expressed its concerns about the gap between the goal of reducing greenhouse gas emissions by 2050 and the inadequacy of the resources available to give the European economy the technologies and infrastructures required to bring about the transition to a low-carbon economy. (5)

However, both approaches are in reality in part dictated by the countries' own global social, economic and political contexts. Politically and economically, the context in China, with a single-party government with little or no public debates on its decisions, and a planned economy model where orientations are directly set by rulers in Beijing for all "autonomous areas", provides simpler and more homogenous administrative procedures that the European Union cannot benefit from. On the other side, the European social display, in which the high-levels of freedom, the stable regulatory framework and the general consumerist behaviour of population paves way to more innovation and creativity, gives more assurance and security to private companies interested in access to the green economy market.

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