

The regulatory state vs the developmental state: the case of the EU

(First version: comments are very welcome!)

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Abstract

The European Union is often described as a regulatory state. However, it can also be described as a developmental state. This paper will discuss the two concepts and use them to analyze the tensions inherent in some of the policies pursued by the EU. Some areas of European policymaking, such as competition policy, follow the regulatory pattern while other areas, such as R&D, follow the developmental pattern. The two are mixed in the so called EU 2020-strategy.

The two concepts are similar in some the effects they want to achieve, such as competitiveness and long-term economic growth in Europe. However, they are almost opposite in the role they give to policy and in the relationship they want to see between public and private actors. While the regulatory state sees independent agencies as impartial umpires, the developmental state encourages collaboration and even the role of agencies as drivers and promoters of business.

Both kinds of state have side-effects. Regulatory policies may be very transformative when applied. They may also fail to reach their goals. Developmental policies are more open for classic government failures in that they tend to be based on wishful thinking about politics and policies.

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1. The contradictory policies of the EU

There is a puzzling contradiction in the policies pursued by the European Union. On the one hand, the EU is seen by many as a driver of neoliberal ideas, forcing its member states to change their policies through deregulation and reregulation (Scharpf 2010, McCann 2010). On the other hand, the EU spends money on support for the development of the economy, building up its capacity to act on the European level to support firms, regions and individuals (Bornschieer 2000, Morel, Palier & Palme 2012).

Apparently, the EU wants to limit the role of the state in the economy at the same time as it makes the state stronger in other respects. This is the fundamental contradiction which has inspired this study. The policies are based on partly opposite values and clash with each other, so how can an organization like the European Union drive an agenda of deregulation and more of markets, while at the same time building up itself to be a state-like entity, interfering with the operation of the very same markets? Can these ambitions be reconciled? Is it rational to combine the two strategies? Inconsistencies and contradictions may be good for political reasons, but they often reduce the impact of policies.

The contradictions in the EU have been observed by many others. Bastian van Apeldoorn (2009), following David Levi-Faur (1998), describes the EU as a rivalry of three kinds of economic ideologies, neoliberal, neo-mercantilist and social democratic, where the last group focuses on non-economic goals and is of minor interest in this analysis. Social democrats tend to side with mercantilists on economic issues, but they are also strong proponents of free trade, like the neoliberals.

This paper will discuss the concepts of regulatory and developmental state and use them to analyze the tensions inherent in some of the policies pursued by the EU. Some areas of European policymaking, such as competition policy, follow the regulatory pattern while other areas, such as R&D, follow the developmental pattern. The two are mixed in the so called EU 2020-strategy. The paper will add to existing works on the policies of the EU in two ways; by showing some of the conflicts among policies pursued by the EU and by showing some of the wishful thinking behind the mercantilist policies, especially in innovation policy. It will be an outline of relevant issues rather than a full treatment of all relevant issues.

The two concepts of developmental and regulatory states are similar in some of the effects they want to achieve, such as competitiveness and long-term economic growth in Europe. However, they are almost opposite in the role they give to policy and in the relationship they want to see between public and private actors. While the regulatory state sees independent agencies as impartial umpires, the developmental state encourages collaboration and even the role of agencies as drivers and promoters of business. Both kinds of state have side-effects. Regulatory policies may be very transformative when applied. They may also fail to reach their goals. Developmental policies are more open for classic government failures in that they tend to be based on wishful thinking about politics and policies.

I will begin by showing the positions taken by the EU. It will be a short overview with only the key documents rather than all the relevant policy documents (see Niklasson 2012 for a fuller overview). Then I will discuss the clash of theoretical perspectives behind these policies, which make different assumptions about the policy problem at hand. I will concentrate on the concept of the EU as a developmental state, as elaborated by

Fred Block, which gives a reasonable description of the mercantilist policies pursued by the EU. I will then discuss the intended causal links (“program theory”) of some of these policies as well as hidden assumptions and problems with this line of thinking. In the conclusions, I will propose a way to improve the situation, by developing the mechanisms for learning from experience.

2. How mercantilist is the EU?

The mix of mercantilist and neoliberal policies has been there from the beginning, in the three organizations set up in the 50s. The European Coal and Steel Community, ECSC (1951) was mainly a planning agency, with some instruments for industrial policy, while the European Economic Community, EEC (1957) was a free trade association and the Euratom (1957) was specifically about the joint development of a particular industry (nuclear energy). Elements of pro-market thinking were visible in the EEC (the Rome treaty), while elements of state intervention in the economy were evident in the first and in the third organization’s mission and design.

The big change of policy in the EU came with the development of the single market in the 80s, when the member states agreed to remove almost 300 barriers for economic integration by 1992. They also agreed to move on to develop an Economic and Monetary Union. In other words, they showed a strong commitment to placing themselves under pro-market restrictions and there has been a steady increase of such policies since then. With hindsight, this is where the EU started to have a major impact on the policies of the member states (McCann 2010).

Mercantilism also took steps forward in the 80s, culminating in the doubling of Cohesion policy in 1988 and a treaty base for industrial policy in Maastricht 1992. This is often interpreted as a leap forward with industrial policies, but in reality the EU was very reluctant to develop these policies until 2002. There have been some shifts in spending, from agriculture to R&D and regions (cohesion), but also some rather negative statements (or rather lack of endorsement).

In 1990 the Commission produced a key position paper, where it took a stand against public support for business, arguing that “(T)he main responsibility for industrial competitiveness must lie with firms themselves” (Commission 1990:1). A key section of the document outlines a causal chain, which starts with “staying abreast of international industrial competition” as the overall goal (the endpoint of the causal chain). This is said to require “staying ahead of technological competition” as an intermediary goal, but instead of drawing conclusions about public funding for R&D, the document talks about “firms’ capacity to invest more and more efficiently in both equipment and technological know-how...”.

The text discusses the diffusion and use of R&D, but only mentions in passing the strengthening (funding) of pre-competitive R&D. It says more about supporting the firms’ internal R&D efforts and the role of SME’s in the diffusion of knowledge to the larger firms (ibid, 17). This is remarkable since the document lists other areas of supporting policies; education, cohesion and environmental policy. The funding of R&D is mainly discussed in terms of coordinating national policies (ibid, 18f).

The causal chain becomes more clearly visible if we contrast it to the chain of events which are common in thinking about subsidies for R&D, where the idea is that public funding provides a basis for activities in firms to gain a technological lead:

(Taxes) → Public funding of R&D → Firm use of R&D → Technological lead → Competitiveness

Figure: The causal chain according to simplistic mercantilism

What the Commission outlined was a similar causal chain which starts with profits and private investments rather than taxes and public investments. The document also hinted at the beneficial effects of competition, in stimulating learning and innovation (including innovations not based on R&D):

Profits → Private investment in R&D → Firm use of R&D → Technological lead → Competitiveness
(Competition) → Learning by firms → Other kinds of innovation ↗

Figure: The causal chain according to the Commission (1990)

The Commission furthermore opted for horizontal industrial policies rather than sectorial policies, meaning that it chose general policies rather than policies to suit the needs of particular industries. “The experience of the 1970s and 1980s has shown that sectorial policies of an interventionist type are not an effective instrument to promote structural adaptation” (19), but also that “special importance has to be attached in this context to coordinated efforts for research”. The vagueness of the paper was partly settled in bitter fights over support to the electronics industry shortly after, where the Commission decided against support for firms in this industry (Dinan 1999:371).

In 1995 the Commission presented a Green Paper on innovation which places the issues in the context of the new thinking at the time on innovation systems (Biegelbauer & Borrás 2003). The proposals of the Green Paper are, however, limited in their range and there wasn’t any major increase of funding, either within the EU budget or by transfer of mandates from the member states. The four main themes were: to orient research towards innovation, human resources, problems with financing and the legal and regulatory environment. When the Commission presented its follow-up Action Plan on Innovation in 1996, the list of actions was along the same general lines but even shorter.

These policies lived on after a change of political majorities in the member states and a new Commission under Prodi, but were reversed in 2002, when a new Communication on competitiveness was presented, this time under the label of industrial policy. It set a new tone by an introductory reference to the competitiveness of the manufacturing industry (2). It furthermore stated that industrial policy is horizontal but also concerned with sectorial application (“reality checks”) and that the Communication itself is “intended by the Commission as the start of a process of examination of the appropriateness and balance with which its industrial policy is applied” (3, 30). It furthermore stated the need to create an enterprise culture and more coordinated R&D.

The half-way return to the sectorial policies of the 70s and 80s was later called a “matrix approach”, meaning that horizontal rules have to be tailored to fit specific sectors. It stretches the concept of horizontal policy but avoids the old conception of sectorial pol-

icy (Aiginer & Sieber 2006). The attention to sectorial consequences could be described as middle ground, something that the proponents of horizontal policy may accept.

In 2005, the new Commission under Barroso restarted the Lisbon Strategy with a focus on jobs and growth (putting other policies in second place) and announced a slightly revised Industrial Policy. It started by stating the importance of the framework conditions and made an early point of saying that “business have the responsibility to develop their products and processes” and that “the role of public authorities is to act only where needed, i.e. when some types of market failures justify government intervention or in order to foster structural change (and) ...reduce the social costs of structural change” (3), implying that the roles may have been differently conceived under the previous Commission.

More unexpectedly, the Commission pointed out that “the scope of policy instruments should not be seen just as only very broad horizontal measures. For industrial policy to be effective, account needs to be taken of the specific context of individual sectors” (3). It went on to say that “(T)he Commission therefore stands by its previous commitments to encourage and facilitate the process of industrial innovation and change”, referring back to the Communications 2002 and 2004, by the Prodi Commission. “However, a new approach ...is required aimed at achieving better designed policies that are more relevant, integrated and consensual” (4, 8). The Communication introduced seven cross-sectorial policy initiatives, one of which referred to industrial research and innovation, and a similar number of sector-specific initiatives.

This situation lasted until 2010, when the matrix approach was reinterpreted in a more market-conforming way, with rhetoric almost as strong as in 1990. The most recent documents can be interpreted as a shift of focus, from helping the sectors, to getting more contextual information from the sectors in order to develop the horizontal policies.

In 2010 the Commission produced a communication on industrial policy which promised a “fresh approach”, to cover all policies with an impact on firms and all the effects on competitiveness of other policies (4). Towards the end of the document, the Commission says that “in the context of fiscal consolidation, competitiveness strategies cannot be built on major spending programmes, but are more likely to address structural reforms in areas such as improving the business environment, modernising public administrations, improving companies’ ability to innovate or enhancing energy efficiency” (30f). Under “Framework conditions” reference is made to competitiveness-proofing and smart regulation, which includes impact assessments by the Commission and the member states (5ff). Access to finance is mentioned as another framework condition (7f), while developing the single market encompasses regulatory issues (competition policy, intellectual property rights) and improved infrastructure (8ff).

A new industrial innovation policy, outlined in the “flagship initiative” Innovative Union, will focus on faster development and commercialization of goods and markets, which is almost the opposite to focus on the funding for R&D. So called key enabling technologies are mentioned with the comment that “Europe has a leading position in scientific research, but the timely development and take-up of these technologies throughout EU

industries, including SME's, needs to be ensured" (12f). In other words, the emphasis is on what industry should do rather than what the public sector could do.

Some of the sectorial initiatives launched earlier are discussed primarily in terms of developing a shared vision on R&D and learning from experience, rather than developing tailored policies (13). "For effective innovation policy, we need better insight into sectorial innovation performance and future potential" and also "closer cross-sectorial cooperation" (14). The flagship initiative "An agenda for new skills and jobs" is mentioned in the same context. Other initiatives relate to trade, raw materials, sustainability, unemployment ("structural excess capacities"), corporate social responsibility and five sectorial initiatives which touch upon several general (horizontal) issues.

To summarize, the EU operates with two strategies. The market-building strategy has dominated since 1990, but the mercantilist strategy was strong 2002-10. There have always been elements of mercantilist policies, even though they don't dominate the rhetoric on competitiveness. From a Swedish perspective one may wonder why the EU doesn't transfer resources from its agricultural policy or even from its member states to support firms, regions and individuals.

3. A clash of theoretical perspectives

The two types of states (the strategies of neoliberalism and mercantilism) are much dependent on assumptions and theoretical perspectives. The market-building and market-correcting strategies can be built on neoclassical theories of integration such as trade theory. They can also be based on evolutionary economics. For completeness, one should also mention that much analysis of the behaviour of firms is based on sociological theories, which make different assumptions.

	Static perspective	Dynamic perspective
Economics: People and firms are utility maximizers	<i>Neoclassical theory</i> Positive effects from trade, scale, factor markets, single currency Negative effects from market failure. Remedy: developmental state.	<i>Evolutionary economics</i> Positive effects from larger room for entrepreneurs Risk of lock-in. No remedy?
Sociology: People and firms are norm-followers	<i>Social constructivism</i> Positive effects from more market-friendly norms and more innovative firms to copy. Negative effects from bad examples?	<i>Evolutionary sociology?</i> (examples?)

Figure: Four theoretical perspectives in the literature on economic development

There are many theoretical cases which can be made for economic integration in Europe. Baldwin & Wyplosz (2004) is a classic textbook which refers to gains from trade, scale effects in markets, factor market integration and effects of a single currency. These effects are prominent in the debate and give much backing for some of the key policies of the EU, such as the single market, the economic and monetary union and

competition policy. Each of the theoretical arguments is well known and can be discussed in more detail, but I only want to use them as a background for discussing other arguments. I want to show that there are other types of theoretical arguments, in favour of the “neoliberal” policies as well as the “mercantilist” policies.

The cases mentioned by Baldwin and Wyplosz are within the boundaries of neoclassical theory (or versions of it). They assume that people are utility maximizers and they have a static perspective on the economy. Other theories have a dynamic perspective and/or assume that people follow norms rather than interests. There is a booming literature based on social constructivist assumptions (e.g. Djelic & Sahlin-Andersson 2006) and also attempts to integrate this into an economic framework (e.g. Vatn 2006, Gustafsson & Autio 2006).

One kind of constructivism makes the point that actors, including governments, are often irrational. Nils Brunsson (2007) gives the example of industrial policy in Sweden, where the Ministry of Industry chose a paradoxical approach to deal with the closing down of a factory. It worked closely with the affected parties and accepted their perspective on the problem, i.e. to build new business and jobs on existing skills, rather than promoting new ideas for economic development, which would probably have been rational from an Economist’s point of view. The ministerial reaction was one of “muddling through” and showing sympathy (gaining votes in the short run) rather than really trying to solve the problems, which most likely were beyond the control of the Ministry.

The idea of market failure belongs to the same category as Baldwin and Wyplosz, i.e. a static perspective on utility maximizing. The concept itself is based on the assumptions of welfare economics and has some intuitive appeal, for example in the hypothesis that firms will underinvest in R&D if others can take advantage of these investments. R&D is seen, in the simplest versions, as a public good, freely available to everyone when it is produced and therefore open for free riding. More elaborated versions of the argument acknowledge that it may take big investments to use the knowledge (i.e. the knowledge isn’t public) and that the first mover may obtain a temporary monopoly position, reaping the full profits from the investment.

The idea of market failure is often used to justify public investments in R&D, but also public systems of intellectual property rights (patents) as well as investments in education and infrastructure. All of these are things which give an indirect support for the growth of the economy.

However, many innovation scholars have noted that the idea of market failure comes from welfare economics where it is used to describe static relationships between buyers and sellers (Chang 2003, Dodgson et al 2009). When the focus is shifted to the processes of economic development, these assumptions make little sense. Evolutionary theories shift the focus to the processes of development of the economy. It is pointless to assume perfect markets where individuals know many things, when much of the change over time is about differences in available information. The alternative view is that the failures refer to shortcomings such as information asymmetries, which are what markets and entrepreneurs exploit. Hence, Charles Edquist and others have noted that there is no optimal innovation policy.

In this perspective, the “failure” is rather when evolutionary processes lock themselves into “dead ends”, such as when firms invest in technologies where they are successful, only to find that competitors have developed new technologies which are more successful. This is a topic much discussed in cohesion policy, since the risk of lock-in is a big problem for regional development. Should regions invest in more of the same, to gain a competitive edge or should they diversify or even do what others do, which faces the opposite risk of not being noteworthy in anything? This is a true dilemma, which means that there is no solution in theory. I will come back to the lack of attention to this problem in innovation policy, which indicates a presence of wishful thinking.

Some scholars talk about “system failure” or even “social-cognitive failure” (Gustafsson & Autio 2006), to maintain the basic idea that there are shortcomings which can be overcome by governments or, to put it differently, that subsidies can speed up the process of economic and technological development.

It is often assumed in the debate on R&D and industrial policy that governments can correct these failures without creating other problems (“government failure”). Other types of literature, such as Political economy (Weingast & Wittman 2006) have found that governments are irrational too; an example is the argument that governments need to bind themselves under rules to avoid short-term spending at the expense of long-term growth (Brennan & Buchanan 1985; see Crouch 2011 for an overview and critical discussion).

A more convincing line of argument for industrial policy is the empirically based idea of a developmental state, which points to the experiences from a number of countries where government actions are often seen as beneficial (Woo-Cumings 1999). The most recent examples are Asian countries like Japan, Korea and Taiwan, but examples can also be found in Europe in the 19th century and even the US, where Alexander Hamilton argued that the young republic should support its manufactures by protectionism. More elaborated versions cover the whole spectrum of good governance and institutional foundations for growth (Rodrik 2007). Fred Block has recently used the concept to describe industrial policies in the US, mainly in the field of R&D.

4. The developmental state

Fred Block uses the concept of a Developmental Network State (DNS), where “the main focus of the DNS is to help firms develop product and process innovations that do not yet exist, such as new software applications, new biotech medications, or new medical instruments” (ibid, 172). Block’s DNS is very close to the concept of “triple helix”, which also refers to collaboration between companies, universities and public agencies (Etzkowitz, Webster & Healey 1998) and to the concept of “innovation system” (Lundvall 1992), which is elaborated further.

The policies of the developmental network state are summarized by Block under four headings: targeted resourcing, opening windows, brokering and facilitation. The “targeted resourcing” refers to the role of administrators/funders in identifying needs for R&D in the form of technological challenges with a potential for economic profit. Put differently, the funder becomes a broker between scientists and firms as well as a mechanism for quality control of research (Block 2008:172). In the US, this role was played by agencies such as the Atomic Energy Commission, the National Aeronautics and Space Agency

(NASA), the Advanced Research Projects Agency (ARPA) in the Pentagon and the National Institutes of Health (NIH).

“Opening windows” is almost an opposite, helping many flowers bloom. Here, money and equipment are provided for the development of new ideas into firms (Block 2008:172f). The most important programs in this area in the US are the Small Business Innovative Research (SBIR) and the Small Business Technology Transfer programs, which support feasibility studies and the development of prototypes, but not the actual commercialization of a product.

“Brokering” is literally about helping other actors make contact, either to combine technologies or businesses (Block 2008:173), to “link scientists and engineers to others who have the ideas and techniques that they need to solve their problems” (ibid, 192). This is a role which can be performed by program officers in the agencies which fund R&D, university researchers who work with companies, people who work with SBIR or technology transfer, as well as people in industry consortia (Block 2008:192).

“Facilitation” refers to activities to promote the use of a new technology, such as creating an infrastructure (i.e. building roads for cars) or regulation. An important aspect of this is to decide on technical standards which accelerate the commercialization of new technologies.

Many of the instruments described by Block are used by the European Union and its member states. Government involvement in the economy is generally bigger in Europe than in the US, but varies across sectors and countries. State ownership and regulation of companies is (was) a common practice, especially in France and other Mediterranean countries (Schmidt 2002), while Germany and Scandinavia are closer to the American model described by Fred Block. The German state of Baden-Württemberg is a leading example of the developmental (regional) state, while Emilia-Romagna (Italy), Wales (Great Britain) and the Basque country (Spain) are known for other types of models (Cooke & Morgan 1998).

Following Block’s categories, there are many examples of targeted funding by the European Union. Euratom was followed by big developmental projects such as constructing the three European airplanes Concorde, Tornado and Airbus. Framework programs for R&D were introduced in 1984 and consolidated after 1992 (Peterson & Sharp 1998). When it comes to “opening windows”, there is an interest in connecting R&D funded by the EU to small and medium-sized companies (SME), for example through the innovation relay centers (IRC), which act as a broker between researchers and SME’s. “Brokering” is part of the programs which provide funding for SME’s and larger companies, but it is mainly about researchers interacting with companies.

“Facilitation” refers to regulatory changes which promote the use of new technologies. The European single market is very much about European regulation taking over from a diversity of national regulation. This is the core of the regulatory state in Europe and one of its driving ambitions is to facilitate competitiveness. An aspect of this is to select standards which stimulate the development and use of new technologies (Levi-Faur 1998). The selection of standards can also be part of a struggle for dominance among the member states of the EU.

To summarize, the EU is to a large extent a developmental state as described by Block, though the differences in relation to the American model may be more interesting if we want to understand how it operates. Nevertheless, a relevant question is if Block's model gives a reasonable description of the policies in Europe and the US. There are other policies which need to be taken into consideration.

Many other instruments than R&D have been used by national governments and the EU. An inventory of European industrial policy in the 90s lists ten areas, where the first six are pursued by the EU and to some extent by its member states and the other four areas only by the member states (Lawton 1999:18):

- R&D
- competition rules
- trade policy
- transport and infrastructure
- training and education
- enterprise policy
- export promotion
- tax incentives
- procurement
- inward investment incentives

The most recent statement of policies by the EU is in the general strategy called EU2020.¹ It contains a set of very broad goals (targets) and a long list of policies, grouped in themes and seven "flagships", which are:

- Digital agenda for Europe
- Innovation Union
- Youth on the move
- Resource efficient Europe
- An industrial policy for the globalisation era
- An agenda for new skills and jobs
- European platform against poverty

The flagship initiative on industrial policy should perhaps be the most central of all, as it relates directly to the health and challenges of European firms. However, its contents are generally quite vague. It consists of ten key actions, some of which refer to annual reporting and review of future policy proposals as well as existing legislation. The rest is a list of things that will be addressed, ranging from a space policy and a strategy on raw materials, to support for small and medium sized enterprises (SME) and improved industrial standards. Areas mentioned where the EU has a mandate are transport, energy and communication. On the list are also actions for specific sectors, such as manufacturing technologies and bio-fuels.

The policies in the flagship initiative and the strategy generally, are a limited set of actions, mainly focused on specific sectors ("vertical"), even though some more general ("horizontal") policies are presented in another part of the strategy, under the headline of completing the single market. The flagship Digital agenda for Europe is somewhere in

¹ http://ec.europa.eu/europe2020/index_en.htm

between vertical and horizontal, since it is about promoting the use of ICT, which is a sector as well as a generic technology with many applications.

The flagship initiative on Innovation Union refers to initiatives such as the European Research Area and the European Institute of Innovation and Technology. It talks about pooling resources and focusing EU-funding as well as creating a single innovation market, promoting openness and spreading benefits. Reforming research and innovation systems is also a priority.

At the same time, there are ongoing policies which are absent from the strategy, such as cohesion policy (regional development). A position-paper under the Hungarian presidency outlines the conflicts in integrating cohesion policy in the larger set of economic policies (European Economic and Social Committee 2011). Several concepts, such as capacity building and territorial integration, have been proposed which could transform cohesion policy into a tool for building basic capacity for regional development policy at the regional level. Here, the EU has so far been unable to integrate policies further.

Another example of how the EU works are the so-called Environmental Technology Action Plans (ETAP), related to but not mentioned in the flagship Resource efficient Europe. Here the EU asks each member state to make an action plan for the development of environmental technologies (cleantech), while only taking very few actions at the supranational level. Making such a demand will stimulate national efforts to fund the development of these technologies and make the member states take actions to facilitate the use of the technologies.

To summarize, the range of policies pursued in Europe and the US is larger than the policies Block describes. His conception of the Developmental Network State is reasonable in the sense that he describes things that are going on, but not in the sense that it is a complete description of the policies pursued in Europe (or even the US; e.g. Eisinger 1988). However, Block only describes the mercantilist side of policies. What makes the EU interesting is that it simultaneously pursues neoliberal policies, aiming for a mix of competitive pressures and support (subsidies):

	Competitive environment	No
Subsidies	1.	2.
No	3.	4.

Figure: Four combinations of neoliberal and mercantilist policies

The four positions are theoretical constructions. Most countries apply some kind of combination, while developmental states like traditional France (Loriaux 1999) are leaning to the right in the figure. Countries with a heavy reliance on market forces lean downwards in the figure. The US is probably applying both types of instruments to a larger extent than the EU (not counting policies by the member states).

5. Instruments of the developmental state

If we look deeper into the instruments of the developmental state, there are several options. As indicated above, the EU has some developmental policies but is reluctant to using them. This is not just a question of whether these policies are desirable or not, but also a question of the level where these policies should be pursued. Most member states

have developmental national policies but not all of them think that the EU should have a mandate in this area. In theory, policies should be transferred to the European level if there are gains for everyone to do so. The key is spill-overs, for example, if some countries fund R&D which is of benefit to all countries and this cost is larger than the cost of coordination (McDonald 1999:29f).

The positions can be illustrated by four countries. With the launch of the single market, the UK was reluctant to technology policy nationally as well as on the European level, whereas France wanted to shift some of its policies from the national to the supranational level, to pursue developmental policies at both levels. Other states may have agreed in principle but were reluctant to provide the funding necessary. Germany is a case in mind. The fourth logical combination of no such policies at any level may be reasonable for countries with few national policies before membership, like the countries of Central and Eastern Europe.

	National technology policy	No
European technology policy	France	(CEE-countries?)
No	Germany	UK

Figure: Positions on technology policy (developmental policy)

There could have been a similar choice in competition policy, before the Rome treaty. The only countries with national competition policy were the UK and Germany. France and other countries first got a European policy and then a national policy. In this area, there is no trade-off between the two levels of policy. They rather work together to form a unified European competition policy.

In the policies of the developmental state there are further options. An important issue in the 90s was to shift from the previous vertical policies, targeting specific sectors, to more horizontal policies, applying policies equally the whole economy. These options can be combined, which means that they should be described as two different dimensions, making four possible combinations.

	Horizontal policy	No
Vertical policy	2002-2010	Pre 1986
No	1990-2002, 2010-	-

Figure 4: Positions on technology policy (industrial policy)

It is remarkable that the EU has changed its policies several times. The first shift was from vertical to horizontal, while the second shift was to a mix and the third shift was back to less of vertical policy.

If we want to understand what governments and the Commission of the EU can do, we need to consider various forms of intervention:

	Supply	Demand
Direct	Public R&D Public education Public venture capital	Vouchers for R&D Public procurement
Indirect (pre-	Subsidies for savings/lower	Tax-deductions

competitive)	taxes	
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Figure: Type of instruments

Subsidies for R&D in the framework programs are primarily given to the producers of knowledge, such as the universities. An alternative to increasing the supply of knowledge would be to give firms a subsidy for purchasing knowledge from the producers. Such demand-side instruments are used in many countries (Izsak & Edler 2011). Public subsidies for spending can also be given in the form of tax-deductions for private investment in R&D. Tax-deductions are an indirect support for the demand for knowledge.

It is important in an evaluation of policies like these to account for alternative ways to fund R&D. Firms provide a large amount of funding for R&D and a base-line comparison could be made with situations where strong owners like banks in Germany supply the long-term capital and strategies to build up private resources for R&D. Public policies need to be put in the perspective of no policies, to avoid assuming that policies are automatically improvements of the situation.

This short and stylized overview of the instruments of the developmental state is just intended to illustrate the important choices of design which have to be made. Many of these choices are politically contested.

6. The causal mechanisms of EU support for business

Policies are based on intentions, but they aren't always successful. Much research on policy implementation tells us that it is often more difficult in reality than in theory to achieve desired outcomes. One way to make this explicit is to elaborate on the intended causal mechanisms. This is done by means of "program theory" or "logical framework analysis", as it is also called.

It is striking that developmental policies are of a normative nature. They express an expectation and/or desire that something should happen. They are based on values and/or instrumental theories about causality, often some kind of economic theory. All of the policies above are, at least officially, thought to bring about the desired consequences, variously stated as economic development or competitiveness etc. A full investigation of the policies would have to look at the assumptions and how policies work in different contexts. In essence, the policies are ideas about very complex causal mechanisms, which is often referred to as a program theory, a more or less elaborated plan to reach desired outcomes (Owen & Rogers 1999).

Program theory is a tool to make the causal chain explicit. Spelling out the program theory will help us see the politics. What is done in line with the program theory? What is not done? It is beyond the scope of this paper to reconstruct all of the assumed causal logic behind the policies, but some comments are necessary to illustrate the thinking behind the policies.

The first example is regulatory policy in general, where the idea is to have uniform regulation across Europe. With some simplification, the policies of the EU establish common regulation which is thought to bring about more competition and stronger firms.

The steps of the policy	Assumptions to get to next level
1. Problem: Disparate regulation inhibits dynamism	Other factors less relevant There can be agreement
2. Common regulation	No other barriers More firms compete
3. More competition	The fittest survive Other firms don't survive
4. Outcome: Stronger firms	

Figure: A program theory of competition policy

The most important contribution of program theory is to make hidden assumptions explicit. In this case, there are assumptions about other factors having no impact, which may be implausible in real life; there can be other barriers and firms may survive in spite of competitive pressures. It is also assumed that the policies are designed without flaws and don't give support to other outcomes. There can also be clashed with national policies.

For the developmental state, a program theory would look something like this:

The steps of the policy	Assumptions to get to next level
1. Problem: European firms are technologically inferior	Other factors are irrelevant Rational policies can be designed
2. Subsidies for R&D, clusters etc	Knowledge is the key to firm development The knowledge can be used by firms
3. Better technologies	Technologies are key to new products Other strategies are less relevant
4. Better products	Other firms change less Other strategies are less important
5. Outcome: better competitiveness	

Figure: A program theory of innovation policy

Here, the hidden assumptions have to do with weak links or alternative links. There can be other ways to develop firms and gain competitiveness. In reality, there are many different strategies pursued across industries and countries, which can form alternatives to a simplistic strategy of subsidies for R&D. The point of highlighting the options and assumptions is to see more clearly how the policies have been designed and to find the elements that limit the effects of the policies.

This approach is in contrast to Block, who more or less assumes that the policies have the intended effects and that they are the source of American economic fortunes. He makes the point that he likes the involvement of the government and his thinking starts from the assumption (value) that this is a good thing, perhaps even a value in itself, beyond the effects on the economy.

Block is openly positive to the policies he describes and makes the point that many of the politicians behind the policies are secretly positive but openly hostile. He sees the developmental state as the beginning of a progressive agenda, "a persuasive story of how an egalitarian and democratic turn in social and economic policies could assure prosperity for the nation" (Block 2008:199). This is hardly the values of all American

politicians who have supported these policies; hence, the policies can be supported from other normative perspectives too. In Block's view, a progressive agenda would consist of new partnerships between firms and the government, where firms would be expected to act more as social partners, new policies of social inclusion, expanded public deliberation on the direction of technological change and, finally, shifting resources from a focus on national security to global cooperation and poverty reduction (Block 2008:200).

Block's perspective can be contrasted to that of William Nester (1997), who represents another left of center-perspective. He sees the policies as driven (captured) by industries together with bureaucrats and politicians working with these issues. In Nester's view this is an example of an "iron triangle", political collaboration by insiders and outsiders in the political system who share at least some beliefs and ideas about what to do. They use their united power to grant themselves favorable policies which in turn enhances their power (ibid). Nester's highly critical book discusses five such iron triangles:

- the heavy industrial complex (steel and automobiles)
- the financial industrial complex (banks and stocks)
- the microelectronics industrial complex (chips and networks)
- the military-industrial complex (weapons and spaceship)
- the medical-industrial complex (doctors and drugs)

In comparison, Block has a more positive vision of the role companies can play in the economy and a rather wishful view of their role in politics, though he sees examples of abuse too, for example that some collaborative research centers funded by Congress "fall squarely within the category of Congressional pork" (Block 2008:189). Critics on the right take similar positions, for example arguing that "big business preaches free enterprise but practice big government", referring to subsidies and protection (Weaver 1988). This topic of the relationship between agencies and their target groups is of great concern also in the discussion of the DNS. There it is pointed out that the DNS works well when it is embedded in society, working closely with companies, but at the same time remains autonomous from these companies (Ó Riain 2004:30). The dilemma for the DNS is to avoid too much embeddedness (clientelism, corruption) and too much autonomy (inability to mobilize the private sector). I will come back to the politics in the next section and point out some assumptions in this section.

Block's article is an overview of policies, where the main point is to show that there are more industrial policies than are commonly seen. Block is very positive towards the policies, but the article doesn't claim to be a full analysis of the impact of the policies. Nevertheless, there are reasons to be more skeptical and to look out for "hidden ideas" in the hidden developmental state. One fundamental problem is the confusion of gross effects and net effects. As evaluators like to point out, policies can have positive effects and negative effects at the same time (Sieber 1981). Deadweight costs arise when a subsidy produces no net gain because the recipients are reducing their own funding (using their money for other purposes). So called smokestack chasing is a zero-sum game, where one place attracts an industry which moves from somewhere else.

This indicates that one needs to look closer at the subsidies given by the developmental state. Firms get benefits, but what are the net effects? This is a very complicated issue with at least three possible answers when it comes to the developmental policies Block describes; that firms get more and better R&D than otherwise (which is the desired

end), that firms get subsidized for doing what they would have done anyway (which is a waste) or that firms become too focused on R&D and miss other business opportunities (which is bad).

Policies are sometimes a waste and sometimes even a failure. Public efforts to boost entrepreneurship can fail, which is indicated by the title of a recent book, "Boulevard of broken dreams" (Lerner 2009). They can also overtake the role of consultants and banks in helping businesses grow. In worst cases, regulation may have the side-effect of driving other actors out, for example in the support of SME's where banking regulation allegedly makes banks less willing to take risks or when liquidity rules make pension funds invest in stocks (big business) rather than equity (small businesses), leading to a shortage of capital for SME's, to take examples from the Swedish debate.

There are only few studies of the effects of the European framework programs for R&D and Swedish participation in these (Arnold et al 2008). There are some studies of the operation of programs by the structural funds (e.g. Niklasson & Sandström 2012). One of the key findings was that the EU to a large extent funded projects that wouldn't have received funding without the EU ("additionality"), but that the selection of projects was based on vague intentions and not related to the elaborate planning of national projects, indicating a risk of misallocation. It is doubtful, in the area of infrastructure investment, that it makes sense for the EU to run a parallel funding stream, competing with national and regional funders for the best projects. It is at least as likely that impact will be greater if resources are pooled to a larger extent (ibid).

The implication of the observation from Sweden is that EU-funded projects (of all kinds) need to be analysed in their local context. It is not enough to note that the EU increases funding for certain purposes, without looking at how the funds are used.

Sometimes the problems have no solutions, at least not in theory, like the dilemma noted in the literature on regional development, of going for regional specialization, which could lead to "lock-in" (a long-run failure) or diversification, which could mean doing what everyone else does (a short-run failure). This has some similarities with supporting existing large companies versus new start-ups or new lines of business within the old companies. Schumpeter emphasized "creative destruction", doing new things. It is easy to think of entrepreneurship policy to support new companies, but it is also reasonable to think of support for improved businesses in big companies. On the other hand, there is a risk that subsidies in R&D preserve existing companies for too long, but it would equally be a mistake to overlook the important role played by MNC's in the economy. This is part of a long debate in economics, going back to Adam Smith and Friedrich List (Watson 2011). One could also take the position that government intervention is desired (or not) for other reasons, such as nationalism or changing the economic trajectory.

Another question is if the US is competitive because of these policies or because of something else. There is an alternative hypothesis discussed in the literature on "varieties of capitalism", that a liberal market economy (LME), such as the US, where coordination is done by the market, is good at radical innovations, shifting resources into new areas such as ICT and biotech, while coordinated market economies (CME), where banks, unions and governments are more important, are good at incremental innovations, making

long-term commitments to develop manufacturing etc. (Hall & Soskice 2001). One possible implication of this hypothesis is that Europe should transform its institutional framework (regulation) to become more similar to the US, which is almost the opposite of Block's developmental state and what many critics of neoliberalism fear. However, since the US practices many developmental policies, the explanation of the US cannot be so simple (Crouch 2005), and neither can the lesson for Europe be.

Another issue raised by the "varieties of capitalism" is if it is a good thing to pursue the same European policies in all member states. The EU may want to make its member states more similar but it may also be an unintended consequence of the policies pursued (McCann 2010). There is a debate about the differing impacts of the market-making policies, where critics argue that national policies are undermined in countries like Germany (Scharpf 2010). Developmental policies can be more easily adjusted to national contexts, but there may still be misfit.

To summarize, the policies in the US and Europe rest on many hidden assumptions about causal effects. Block and others seem to assume that the policies work mainly as intended, while in reality these issues are very complicated matters which need to be explored further. To put it more strongly: is industrial policy almost always driven by self-interest (Nester) or almost never (Block)?

7. Summary and conclusions

I have described some of the contradictions of EU policy and shown how the mix of market-building and market-creating policies has varied over time. The policies are based on a variety of theoretical perspectives, where the concept of a developmental state is one of the most interesting. Fred Block's analysis of the US is applicable to the EU, though there are even more developmental programs than Block accounts for. I showed some key options in the design of the developmental programs and also how the policies imply a chain of causal links. Finally I discussed some of the flaws of the intended causal mechanisms. Block assumes that the model works as intended, which is something that needs to be shown.

The above shows that the EU moves in several directions. There are policies to deregulate markets and there are also policies to support firms. "Neoliberal" may be an accurate label for the first type, but not for the whole package of policies. "Mercantilism" is more accurate to describe the support for firms. The policies are partly compatible but contradictory when taken to their extremes.

The EU is aware of the contradictory policies. A group of independent advisors presented a report in 2010 on how to develop the EU for 2030 (González et al 2010). Among other things, it wished for further reforms of the economy. Mario Monti, the former commissioner for the single market and for competition, who was on the group of independent advisors, gave further advice in a report invited by Commission President Barroso. The approach of the report was to find common ground for countries leaning towards LME and CME (Monti 2010).

The present mix of policies may actually not be what anyone desires. It may be an unintended outcome of struggles over time among the left and right in Europe. The neoliberalism may be the result of strategic bargaining, such as to launch the single market. It is

easier to think of mercantilism (or a mix of both) as a common ground, a desired policy for the left as well as the right and populists. Neoliberals and Social democrats can agree on growth and some of the value of creative destruction, while Mercantilists and Social democrats can agree on expansion and state-building by the EU.

It seems that there is a stronger coalition for state-building than for market-building in Europe. Some policies of a neoliberal kind may be acceptable or desired by the leaders of Europe, but the same is true for policies of a mercantilist kind. EU-pragmatism is to pursue several types of policy at once. One of the risks with this pragmatism is that neither type of policy works at its best.

Three questions come to mind. First of all, where does the politics lead? One puzzling aspect is that the debate is very much a fight between left and right, social democrats and neoliberals, but it seems that the middle position of mercantilism is winning. A state which cares for companies seems to be a winning concept, at least when competitiveness is a common concern, in the EU as well as in the US. One could ask the counterfactual question of why critics of companies (Nester) have been unable to make an alliance with critics of the state (Weaver). Friends of states and companies seem to get along much easier.

The second question which comes to mind is if there is a way to combine the two agendas pursued in the EU, i.e. economic development polices and reregulation at the same time. This is de facto what is attempted, but these agendas seem for the moment to be based on very different philosophies. Still, there is an interesting overlap between them, in that both claim to produce stronger companies and more competition. Both risk leading to the opposite, through capture. The search for a synthesis challenges us to think more about collaboration and competition and what our assumed causal mechanisms look like.

The third question is what can be done to improve the situation. Can the EU design better policies? I think the learning from experience can be improved. The EU spends large amounts on evaluations, but they are often descriptions of what has happened rather than discussions of causal relationships. Even if these matters are extremely complex, the EU would gain from a higher level of ambition, aiming for impact analysis in order to identify causal relationships. A great step forward would be to do comparative case studies where counterfactuals can be discussed (Yin 2010), rather than descriptive studies ex post, which is a common practice. There is also a need for more theories from the social sciences, to relate the findings to.

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