



ADVISORY REPORT 1  
TIME TO WALK THE TALK  
JUNE 2014

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*The International Advisory Board (IAB) appreciates this opportunity to provide its views and recommendations on the current state of STI policy in Flanders. As this is the first advisory report of the IAB, it is written from a broad system perspective. The main focus of the report lies on the need to link STI policies more closely to societal value creation. Since this is an issue most advanced countries are struggling with, the IAB members believe it merits continuous attention.*

## **1. FLANDERS: IN A STRONG POSITION BUT NO TIME FOR COMPLACENCY**

The IAB acknowledges that Flanders is performing at least as well as - or even better than - most other European countries and thus has an excellent starting point for broadening the value creation from publicly-funded R&D.

The IAB believes that the present performance of Flanders should be a stepping stone to accelerate the transition towards becoming a European innovation leader, which is an indispensable prerequisite for Flanders to compete successfully on a global scale and retain its high standard of living.

The IAB is aware that a great deal of prior analysis has been done on the policy framework in Flanders in general and innovation policy in particular. Therefore, the IAB sees little need for additional reports or indicators.

Similar analysis has been carried out in other advanced small countries in Europe, as well as in industrialised Asia (e.g. Singapore) and at the European level. The IAB points out that many similar countries struggle with the same issues, namely to get more economic and societal dividends from its sizable investment in R&D. Above all, the IAB believes that becoming a true innovation leader implies first and foremost a willingness to take risks and muster the necessary political courage.

The IAB members believe that government should have a clear and overarching goal for its STI policy: job creation, GDP growth and societal value. STI policy is not – and should never become – a goal in itself.

At the same time, the IAB recognises that many levers that could yield better outcomes for STI actually lie outside the immediate remit of this policy area. Specifically, the IAB points to the challenging larger framework conditions which exist in Belgium that can impede innovation and entrepreneurial zeal. For example, Belgium has the highest non-wage labour costs in the OECD, as well as one of the most onerous tax burdens in the world and a very complex, multi-layered governance system which is prone to excessive regulation. By definition, these are factors that stand in the way of Flanders' efforts to become more entrepreneurial and risk-taking. However, this observation should not be construed as an excuse to forgo concerted policy action – with the explanation that Flemish policymakers cannot impact the larger framework conditions anyhow – but rather as an invitation to try to improve the innovation ecosystem in Belgium as a whole, with Flanders in the lead.

The focus of this first IAB advisory report is on science-based innovation. However, the IAB recognises that value creation is a complex, dynamic process, with R&D being a vital – but far from only necessary – component. More than ever before, innovation is the result of changes to processes, business models, design and co-creation between users and public institutions. Given this rapidly changing nature of innovation itself, the IAB intends to address other pertinent policy areas in subsequent reports.

## 2. THE CHALLENGE: LACK OF IMPLEMENTATION AND RESULTS

The IAB sees the following challenge for policy-makers: **Why is it that in Flanders there is a complete portfolio of policy instruments in place in the STI field, but this portfolio does not sufficiently translate into the desired results of job creation and economic growth?** In other words, Flanders invests a lot of money in R&D and innovation, but does not get an adequate return for its investment, neither in terms of financial rewards from the IP nor in job creation or entrepreneurial dynamism. This is the difficult but crucial challenge the IAB seeks to address in its recommendations below.

## 3. RECOMMENDATIONS: WALK THE TALK OF INNOVATION

### 3.1. Goals

The IAB observes that Flanders does not lack policy goals and political blueprints.<sup>1</sup> However, the IAB observes a disconnect between STI policy on the one hand and the objective(s) set for (science-based) innovation on the other. For the IAB, the ultimate goal of STI policy should be to foster growth in GDP and to create jobs and societal value. The Flemish government currently spends 0.80% of GRP on R&D, i.e. 1,721 million euro in 2012.<sup>2</sup> The IAB believes **voters need a better understanding of how this money is used and what output it generates, with the ultimate goal of being able to hold policy makers accountable for how public money is used in STI policy and the impact it does – or does not – generate.**

Accountability implies that the goals for STI policy need to be clear and explicit, and (where possible) measurable.<sup>3</sup> In addition, STI policy goals should be linked to the overarching societal goals for Flanders.

Recommendation 1 (Goals):

#### **Review and revise the goals for STI policy:**

- **Ensure goals for STI policy are clear, explicit and (where possible) measurable;**
- **Ensure goals for STI policy are linked to the overarching societal goals set for Flanders.**

**Once policy makers have reviewed and decided on the goals of STI policy, they should ensure the appropriate institutional structure is in place to accommodate for these.** Based on international best practice, the IAB believes the following Ministerial portfolio is well-suited to foster STI policy goals:

Recommendation 1A (Ministerial portfolio):

<sup>1</sup> In fact, Flanders has an overwhelming amount of goals, but they are not always linked to each other. The Flanders in Action plan – aimed at positioning Flanders as one of the top five performing regions in Europe by 2020 - defines 20 long term objectives for Flanders. Objective 4 is on Innovation.

<sup>2</sup> For the year 2012 GRP (Gross Regional Product) in Flanders equalled 215,395.5 million euro (in current prices). BERD (Business Expenditures on R&D) was 3,483 million euro (in current prices), or 1.62% of GRP (ECOOM, April 2014).

<sup>3</sup> International good practice: In Denmark three goals have been set for innovation policy, with well-defined targets: Job creation; Private investments in R&D; Number of people with tertiary education working in the private sector. In Singapore the explicit goal of investment in STI is job creation.

**Assign responsibility for economy, science & innovation and higher education within the portfolio of one government minister.**

The rationale behind this portfolio allocation is that economic growth and international competitiveness in advanced economies are almost entirely the result of innovation, science and human capital. Higher education has of course significant overlaps with science and innovation: academic education is based on scientific research, and professional higher education also increasingly presents itself as a link in the innovation chain.

A clear benefit of this portfolio allocation for Flanders would be that universities would no longer receive their funding from – and thus no longer be accountable to – two different ministers (one for the science portfolio, the other for education).

### 3.2. Simplification: A “Must-Do”

Once goals for STI policy have been set (rec. 1) and the governance framework is in place (rec. 1A), **it is absolutely necessary to perform a thorough stock-taking and “clean-up” of the innovation landscape.** Instruments that do not demonstrate a clear link with the goals set should be abolished, as institutions, agencies and instruments should never become an end in themselves. At present Flanders, like many countries, is facing an “innovation jungle”: There are far too many institutions, agencies and instruments. As a result, policy lacks focus and prioritising becomes difficult, if not impossible.

Recommendation 2 (Simplification):

**Enforce simplification wherever possible.**

**STI policy in Flanders can be – and should be – fundamentally streamlined, reducing the number of institutions, agencies and instruments, and simplifying those that remain.**

**This may sound difficult and unfeasible, but IAB members emphasise that it is really only a matter of political will.** The overall situation, including the bottlenecks for innovation, has been studied at length and in-depth, resulting for example in reports such as those put forward by Expert Group Soete I and Soete II, which the IAB members strongly endorse. Rather than suggest that additional studies will reveal new insights – often a manoeuvre to delay necessary political action – IAB members feel strongly that now is a time for action, implementation and simplification. For the IAB, this will form the crucial litmus test for policy makers: Is the Flemish government willing to walk the talk of innovation? Is it prepared to *do* innovation, which by definition means going new ways, taking risks, and letting go of what no longer works or creates value?

### 3.3. Articulate clear criteria for new instruments

Looking forward, it is important not to fall in the same traps as before. New policy instruments should meet a number of criteria. As it all starts with goals, it needs to be clear how new instruments will contribute to achieving these goals. Ex-ante evaluation needs to become standard practice and replace the current practice of ex-post evaluation, which often serves as an excuse to maintain the status quo. One way to ensure that resources do not remain tied up for a long time in programmes that are not paying off is to phase out support by default. Hence,

every publicly supported programme needs to have not only a clear statement ex ante of what constitutes success and failure, but also an automatic 'self-destruct' mechanism for withdrawing support after an appropriate amount of time has elapsed. In other words, sunset clauses should be included. This will avoid problems with resistance to abolishing instruments at a later stage.

Recommendation 3 (New instruments):

**When creating new instruments, ensure they meet the following criteria:**

- **Link (specific) instruments to goals set for STI policy;**
- **Implement ex-ante evaluation as standard practice;**
- **Incorporate sunset clauses.**

### 3.4. Entrepreneurship is of particular importance in small economies like Flanders

To address the innovation paradox Flanders is facing, the above recommendations will not suffice. While Flanders is at the forefront in terms of producing excellent science, data indicates that this top performance does not translate into equally strong science-based innovation. As a result, Flanders is currently a regional innovation-follower, not a regional innovation-leader.<sup>4</sup>

While entrepreneurship and innovation are goals that most countries would aspire to, the IAB members believe that entrepreneurship may be even more important in Flanders, a small region where most large corporations are foreign owned. While such companies are well-suited to absorb and commercialise IP, the returns for the regional economy are unclear, as the IP-related revenues – and expertise – may be transferred abroad. The only way to counter this phenomena is to a) foster more entrepreneurship in Flanders, and b) help local companies grow faster.

Both goals are currently undermined by the prevailing mindset in Flanders. **Even the best science in the world does not necessarily lead to innovation, without the right mindset and attitude.** Data on entrepreneurship in Belgium and Flanders indicate there is reluctance to becoming an entrepreneur, a high fear of failure and a low willingness to take risks.<sup>5</sup>

Evidence shows that **if governments incentivise the right behaviour via appropriate policy levers, such as tax incentives and reducing red tape, mindsets can be changed and behaviour altered.** If it becomes easier and more attractive to be an innovator and entrepreneur in Flanders, the IAB believes that results will quickly follow.

Flanders already has some measures to favour entrepreneurs. Policy makers need to understand which of these measures work and what their impact is on job creation. Flanders also needs to ascertain its comparative (dis)advantage for local entrepreneurs to set up business in Flanders as opposed to going elsewhere (Silicon Valley, London, etc.).

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<sup>4</sup> The same holds for the other two regions in Belgium, namely the Brussels Region and Région Wallonne. Belgium as a country is thus an innovation-follower (European Commission Regional Innovation Scoreboard; European Commission Innovation Scoreboard).

<sup>5</sup> We refer to data from a.o. Global Entrepreneurship Monitor (2013), Flanders' Outlook (2014)

Recommendation 4 (Entrepreneurship):

**Recognise that entrepreneurship is particularly important for small territories, making it imperative that entrepreneurship be incentivised – and celebrated – throughout the system. Special focus should be on innovation-intensive ventures that have a high potential for growth, both in turnover and staff numbers.**

The IAB believes that the government in Flanders should not only incentivise entrepreneurs, it should also learn from them. It is crucial as a small country to choose the areas in which to invest. Government should seek inspiration from the innovation leaders – such as companies that spend heavily on R&D and innovation and that are internationally active and competitive – to see how they allocate their funding. Often they have a portfolio of projects and adopt a stage-gate approach to funding, where projects that do not produce results are discontinued. This way funds become available which in turn can be invested in other, more promising, areas. **A similar stage-gate approach should be used by government when allocating funding to innovation projects.**

Recommendation 4A (Stage-gate approach):

**Seek inspiration from innovation leaders (i.e. industry, start-up scene, investors) and fund innovation projects according to a stage-gate model.**

Even within these boundaries, defining a process which helps crystalize these choices is very difficult. There are no easy answers that guarantee success and it is important to recognise and accept this complexity. One policy approach that can help governments hone in on areas that are most promising is **smart specialisation**. It can assist and guide governments to channel investments strategically and wisely, with some funding earmarked explicitly for new activities, while other monies should go towards ‘upgrading’ existing economic sectors, with a view to helping them move up the value chain. Smart specialisation necessitates governments to make use of an entrepreneurial discovery process, as entrepreneurs tend to possess more information and insights about where future opportunities may lie. Government should incentivise entrepreneurs to reveal and share this information, so that they can help guide economic policies and funding priorities. At the same time, government should ensure that projects are designed in an inclusive, impartial and dynamic manner, not akin of the “picking winners” practices often pursued in the past.

Recommendation 4B (Smart specialisation):

**Allocate funding according to logic of smart specialisation, making sure that monies are allocated to genuinely new ventures, as well as helping traditional sectors upgrade and move up the value chain.**

### 3.5. Actively seek and solicit independent advice

To become a true innovation leader, any government, including Flanders, must be willing to take risks and think outside the box. In an era of constant and accelerated change, no one can afford to stick to the status-quo, protecting short-term vested interests at the expense of pursuing the long-term, public interest.

The IAB members have come to the conclusion that innovation bodies in Flanders closely resemble – in fact often mirror – incumbent vested interests that often have a strong stake in the status quo, such as employer associations, unions, universities, etc. While there is of course a case to have such voices around the table, it is



equally important – and perhaps more significant – to have input from individuals and organisations that do *not* have a vested interest in the status quo. International best practice suggests that it is particularly these forces that can disrupt the intellectual conformity and consensus-orientation that often prevails in groups that consist only of the “usual suspects”.

**Only a truly independent council, where members are appointed according to meritocratic principles, based on expertise and experience, and who can speak in a personal capacity – and not as representatives of an interest group – has the ability to competently oversee the STI domain and shake up the system where needed.**

Recommendation 5:

**An independent advisory council for science and innovation is necessary to help realise the goals for STI policy. Its members should be appointed in a personal capacity and according to expertise, following a public call for interest.**

Both the working and the composition of the Flemish Council for Science and Innovation need to be reconsidered and amended according to international best practice (e.g. Denmark, Switzerland, Germany, Singapore,...) where members – experts from academia and industrial R&D settings - participate in a personal capacity and often are chosen following a public call for experts.

Recommendation 5A:

**Regularly review the continuation of the IAB in light of the goals set for STI policy.**

For the IAB members it is of paramount importance that instruments are a means to achieving policy goals and not an end in themselves. The IAB itself forms no exception. Therefore, having delivered its first set of recommendations on Flemish science and innovation policy, the IAB would like to put its continued existence up for discussion. If the remit of the IAB is to be continued, IAB members ask both the Flemish government and the VRWI for guidance as to how this board can deliver the most added value to the Flemish STI system.

Signed by:

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ANNEX

4. DATA AND INDICATORS

4.1. Entrepreneurship

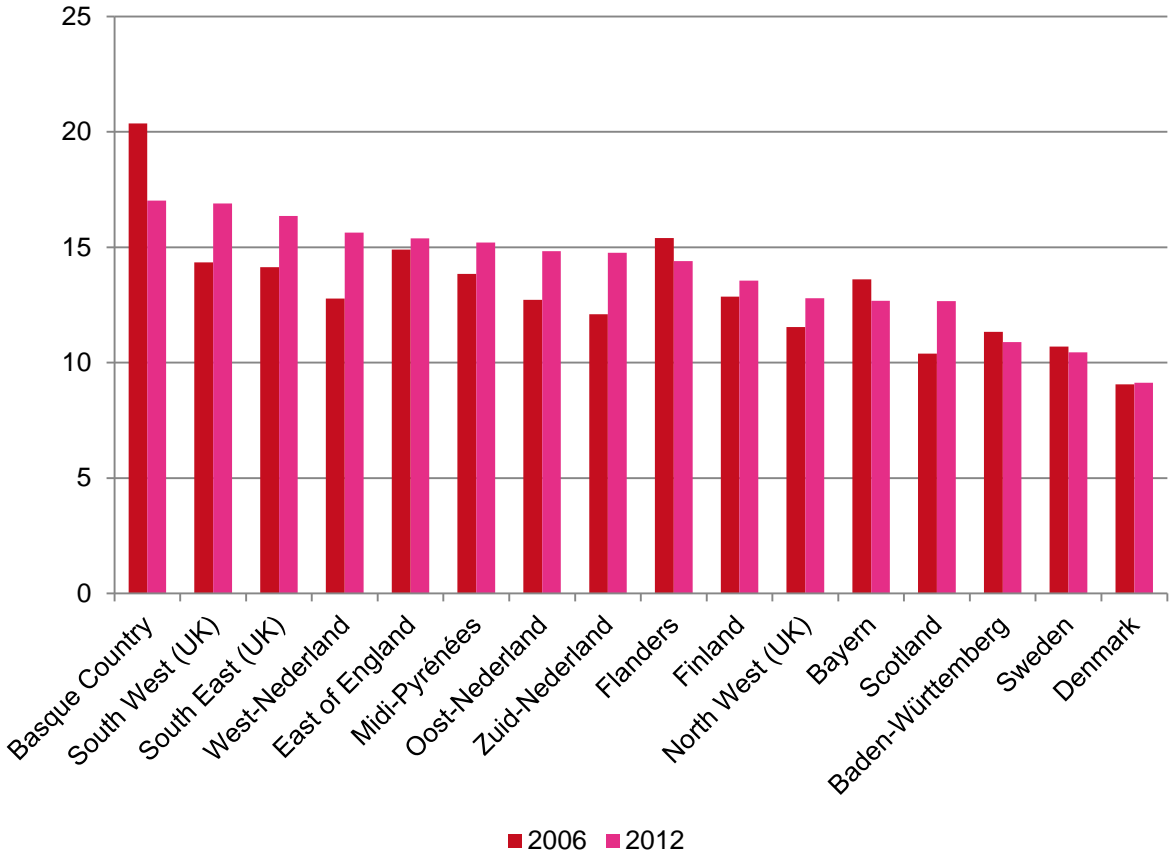
In its first Advisory Report the IAB points out that the **current economic framework in Flanders and Belgium is not conducive to entrepreneurship and risk-taking**. This annex provides data to corroborate this statement.

An often-cited complaint by entrepreneurs in Belgium concerns the burden of regulation and red tape in Belgium. Their concern is not without reason: according to the World Economic Forum, Belgium ranks 133 out of 144 countries on “burden of government regulation” and according to the OECD, regulations are significantly more widespread in Belgium than in other countries.

Box 1 provides data attesting to the low levels of entrepreneurial activities in Belgium and the low levels of self-employment in Flanders.

**BOX 1 - Innovation and Entrepreneurship in Flanders and Belgium**

**Figure 1: Share of workforce self-employed, Flanders and the Flanders in Action benchmark regions, 2012, in %**



Source: Eurostat and Research Centre of the Government of Flanders

Flanders Outlook (2014) uses the share of self-employed as a broad measure of existing entrepreneurship. In 2012, 14.4% of the Flemish workforce was self-employed. Since 2006 this indicator dropped with one percentage point. Flanders was 2<sup>nd</sup> amongst the benchmark regions<sup>6</sup> in 2006 but is now 9th, although the differences between the benchmark regions are not great. The Basque Country is leading the ranking (17.0%), followed by the Dutch and some British regions. Denmark has the lowest self-employment ratio (9.1%). All Scandinavian regions have lower ratios than Flanders.

#### 4.1.1. Entrepreneurial attitudes and perceptions

People in Belgium see more opportunities in becoming an entrepreneur compared to the EU average (31.5% versus 28.7%). However, this is not translated in entrepreneurial intentions, which (at 7.8%) are well below the EU average (13.5%). There is a clear link with the mindset: people in Belgium display higher fear of failure (46.6% vs 39.8%) and have less belief in their capabilities of becoming an entrepreneur (33.8 vs 42.3%). Also, people in Belgium are not positively disposed towards successful entrepreneurs: Belgium scores below the EU average when it comes to according successful entrepreneurs media attention or high status.

**Table 1: Entrepreneurial attitudes and perceptions**

Region	Perceived opportunities	Perceived capabilities	Fear of failure	Entrepreneurial intentions	Entrepreneurship as good career choice	High status of successful entrepreneurs	Media attention to successful entrepreneurs
Belgium	31.5	33.8	46.6	7.8	54.8	52.2	43.9
EU Average	28.7	42.3	39.8	13.5	56.9	65.5	49

Source: Global entrepreneurship Monitor 2013

#### 4.1.2. Phases of entrepreneurial activity

Compared to the EU-average, the rate of nascent<sup>7</sup> entrepreneurship in Belgium is low (3.1% vs 4.8%). Given that the EU is already the region with the lowest levels of entrepreneurship worldwide (below non-EU28 and below North America), these low figures for Belgium are disconcerting. Perhaps somewhat surprisingly in a comparatively rich EU country, entrepreneurial activity in Belgium tends to be more necessity-driven (rather than improvement-driven) when compared to the EU average (29% vs 22.7%). Indeed, the data indicate that Belgium is an exception to the rule that in innovation-driven economies the vast majority of entrepreneurs are motivated by opportunity rather than necessity. Again the link with

<sup>6</sup> The benchmark list consists of: Denmark, Baden-Württemberg, Bayern, The Basque Country, Midi-Pyrénées, Oost-Nederland, West-Nederland, Zuid-Nederland, Finland, Sweden, North West (UK), East of England (UK), South East (UK), South West (UK), Scotland (UK).

<sup>7</sup> Nascent entrepreneurial activity: individuals starting new enterprises less than three months old.

mindset can be made: people in Belgium do not consider becoming an entrepreneur as an obvious career choice.

**Table 2: Phases of entrepreneurial activity**

Region	Nascent entrepreneurship rate	New business ownership rate	Early-stage entrepreneurial activity (TEA)	Established business ownership rate	Discontinuation of businesses	Necessity-driven (% of TEA)	Improvement-driven opportunity (% of TEA)
Belgium	3.1	1.9	4.9	5.9	1.9	29	43.9
EU Average	4.8	3.3	8.0	6.4	2.9	22.7	47.0

Source: Global entrepreneurship Monitor 2013

## 4.2. Structure of Industry

The structure of industry in Flanders implies specific constraints, which limit the options for innovation (policy). Firstly, **industry focus is on intermediate products**, not final products. As a result of this focus on intermediate products, producers' incentives to innovate are weaker. One of the primary reasons for innovation is to capture a larger share of the social surplus. This can more easily be done at the stage of end products. Box 2 illustrates this focus on intermediate products with data from a recent report by the National Bank of Belgium (NBB, 2013).

Secondly, industry is characterised by only **limited anchoring of large multinational companies**, i.e. their corporate headquarters and decision-taking centres are typically not located in Belgium and/or Flanders.

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### **BOX 2 – Structure of industry in Belgium and Flanders**

The increasing fragmentation of production across borders in the form of Global Value Chains (GVCs) is transforming the international trade landscape. The IMF states that Belgium is well integrated in the GVC centered around Germany. However, integration in the GVCs does not necessarily increase the local value added content of exports. Data compiled by the OECD and the World Trade Organization suggests that Belgium faces a problem in this respect: while total exports of goods and services amounted to 71.7% of GDP in Belgium for the year 2009, the value added content of these exports of goods and services accounted only for 34.5% of GDP. As a result, when moving from total exports to value added content of exports, Belgium drops from the 9<sup>th</sup> position to the 18<sup>th</sup> (out of 58 countries for which data are available, Duprez & Dresse, 2013).

Two problematic points emerge from these data. Firstly, the Belgian foreign trade performance is artificially inflated by imported merchandise intended for re-export. In other words, Belgium is a throughput country: for a large amount of Belgian merchandise exports no additional added value has been generated in Belgium. The merchandise only passes through the country, without undergoing any

transformation activity. The port of Antwerp helps explain the high proportion of re-exported merchandise: its infrastructure acts as a point of entry and exit for merchandise on a scale that goes far beyond Belgium and serves a large portion of the European market.

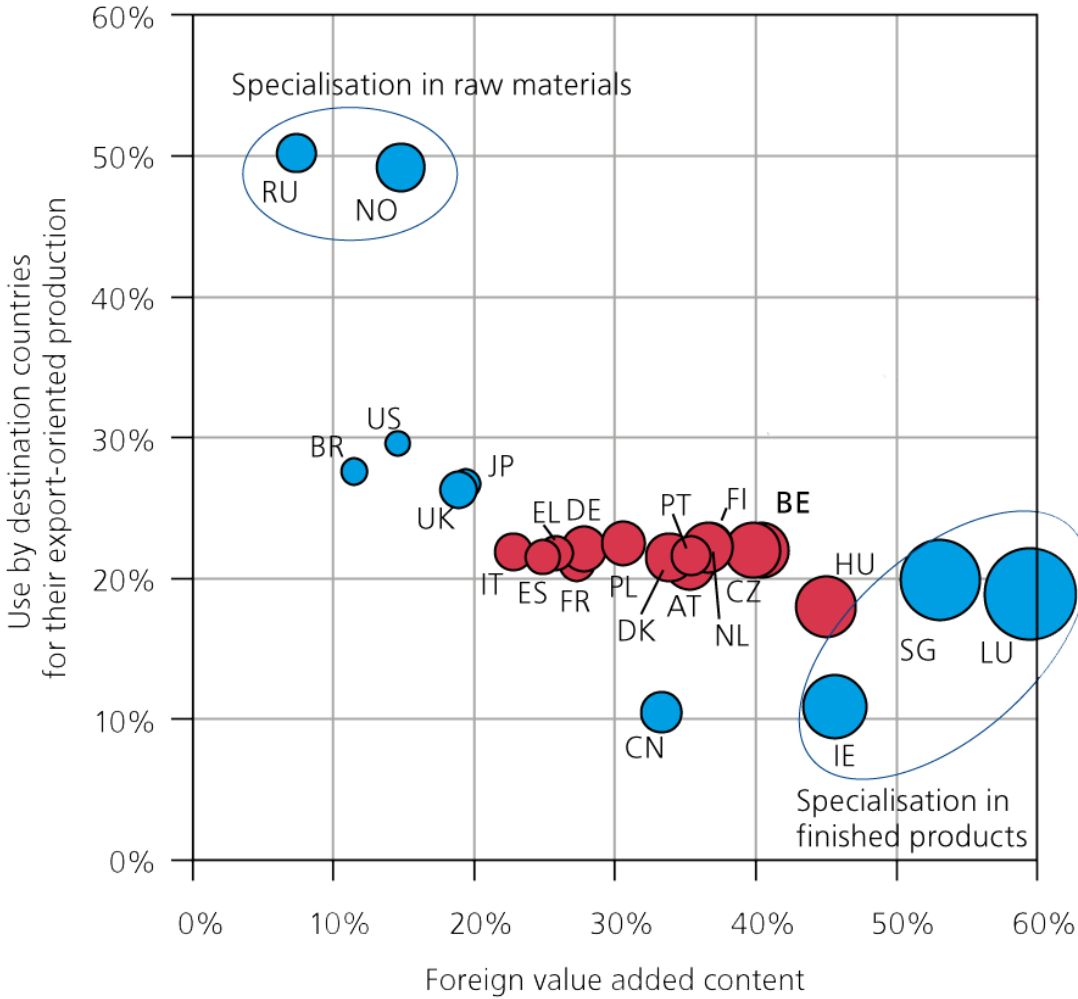
**Figure 2: Importance of re-exported merchandise as a share of total exports**



Source: NBB (2013)

Secondly, compared to countries with similar characteristics (small open economy, international-scale port infrastructure, ...) Belgium relies heavily on foreign intermediate inputs. This may be because the country specialises to a great extent in the industrial branches that consume large amounts of raw materials. In turn, Belgian exports are also situated at an intermediate stage in the production process. They are thus, like those of comparable countries, used as inputs in the exports produced by other economies.

**Figure 3: Positioning in the value chains**



Source: NBB (2013)

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