Belgium in the new global economy: Export and international sourcing

A study commissioned by FEB-VBO and Deloitte Belgium

Co-ordinated by Leo Sleuwaegen (Vlerick Leuven Management School) Carine Peeters (Solvay Brussels School of Economics and Management)
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Co-ordinated by
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Belgium in the new global economy

The structure of the global economy has changed, with emerging markets including the BRIC countries becoming new centers of growth, consumption and production. These rapidly growing countries have become essential trade partners and have increased their share in world trade, both as importers and exporters. In addition, rapid technological change in communication and logistics has enabled an increase in cross-border flows of goods, services and financial transactions and a globalization of value chains. The global restructuring process is accompanied by increasing scarcity of resources, forcing firms and governments to think about opportunities for sustainable growth. In addition, developed economies like Belgium are confronted with the costs of an ageing population.

The current economic environment reflects the complex integration of global and national economies. This is particularly evident in Belgium, a country that has developed into one of the most globalized countries in the world, in terms of trade, foreign investment, migration, and as a host country for important international organizations. This openness has an important impact on the behavior and the performance of firms located in Belgium. Rapid changes in the global economy confront firms with a myriad of strategic challenges for successful growth.

In the public debate, globalization is often perceived rather negatively, with increasing attention being paid to the (weaker) competitive position of Belgian firms on world export markets and the direct employment losses as a result of foreign sourcing of goods and services by firms. The direct and indirect gains in terms of more efficient supply conditions and an upgrading of an economy towards higher value activities are often overlooked.

To gain a deeper insight in these evolutions, the FEB and Deloitte have commissioned a study focusing on the micro economic reality behind both phenomena. In the first part the Vlerick Management School team, led by professor Leo Sleuwaegen, investigates the performance of Belgian firms on world export markets. A morphological approach is used to analyze the performance of different types of firms (small and large firms, multinational enterprises, young and old firms). In the second part, the Solvay Business School team, led by professor Carine Peeters, investigates how Belgian firms are involved in foreign sourcing, particularly focusing on the international sourcing of services.
PART I: Belgium in the new global economy: Internationalization 4.0

1. Toward a new world equilibrium

Rapidly changing international markets create a lot of challenges and uncertainty for internationalizing firms. Despite the current volatility there are some fundamental trends that have a profound effect on the strategic evolution of Belgian firms.

1.1 Emerging markets

The world is changing drastically. Emerging markets are gaining importance in terms of manufacturing, and more recently in consumption. These countries have grown into important suppliers of capital, talent and innovation. Emerging markets include new EU member states in Central and Eastern Europe, many South-East Asian counties and the BRIC countries. The rapid economic growth in these countries opens up new opportunities for Belgian firms. A young, growing population and middle class and increasing purchasing power result in a large and rising sales potential in these markets. At the same time, firms from emerging markets are gaining importance as suppliers and competitors.

The rapid growth in emerging markets contrasts with the slow to negative growth in many developed economies. China is expected to become the largest economy in the world by 2016 (IMF, 2011). The financial crisis increasingly pushes firms towards emerging markets as main drivers of future growth (Ernst & Young, 2011).

1.2 Sustainable growth

This accelerated growth in large emerging countries poses new challenges in terms of management of natural resources and the environment. An increasing demand for limited natural resources puts pressure on the development opportunities for future generations. Worldwide demand for oil, iron, coal and other raw materials is expected to increase by a third between 2010 and 2020 (European Commission, 2012). This increasing demand, coupled with geopolitical pressures for sustainable development, is likely to lead to higher prices.
Firms increasingly react to these pressures. Rising energy costs lead to more climate neutral production methods. The challenge of sustainable growth is often combined with increased attention for corporate social responsibility, integrating economic, environmental and social elements. This trend also resulted in the development of new clusters of activities, including green energy, biomass, electric engines and recycling.

1.3 Global value chains

Trade liberalization and advances in communication and transportation have created new opportunities to spread manufacturing activities into different stages across different locations. As a result, intra-firm trade has rapidly increased over the past decades. However, spreading value chain activities increases the risk and complexity of these operations. In addition, input costs in emerging markets are increasing. Combined with rising energy costs, resulting in higher transportation costs, firms may re-evaluate their operations and location decisions, and opt for manufacturing closer to their customers. This could lead to a consolidation of value chain activities (Ernst & Young, 2011).

1.4 Global networks

The increasing worldwide economic integration leads to the creation of new world-wide networks. Global manufacturing networks are loops of related functions, activities and transactions. Materials, intermediate goods and finished products are flexibly used in plants across different countries. These material flows are linked through networks of services, logistics, technology, and finance. New communication technologies simplify interaction within firms and create new opportunities for collaboration between firms, including the intensive use of international sourcing.

1.5 New modes of internationalization

Firms’ international activities are increasing, and the modes of internationalization are becoming increasingly diverse. Firms from emerging markets, as well as smaller firms, including a large number of start-ups, are increasingly active in international markets. Internationalization strategy and success are contingent upon the competencies, resources, productivity and innovation of the firm (Navarretti et al., 2010). Firms often start their internationalization via import or export, and gradually increase their commitment. Other modes of internationalization, including foreign direct investment (FDI) or foreign joint ventures typically follow later in the process. However, an
increasing number of firms, especially in high tech environments are ‘born global’ from the outset and sell goods in many countries from the start. (Onkelinx and Sleuwaegen, 2011). Firms also increasingly cooperate with foreign partners in sales, manufacturing and knowledge acquisition. International sourcing from external parties is often used to increase competitiveness (Coucke and Sleuwaegen, 2007).

1.6 Productivity in a post-industrial economy with an aging population

Belgium’s rapidly aging population calls for an increase in productivity to maintain stable growth rates. However, productivity growth in Western Europe is slower compared to the rest of the world. Belgium has dropped from being the 3rd most productive economy in 2010, to the 5th place in 2011 (The Conference Board, 2011; Vervenne et al., 2011). Like other European countries, Belgium will have to spur innovation and improve employment rates. Labor market participation remains especially problematic among women and senior workers. At the same time, firms are confronted with a lack of employees skilled in management, innovation and knowledge generating processes (McKinsey 2010).

Whereas Belgian productivity levels in manufacturing are comparable to other countries, those in services are lagging. Services industries are also lagging in terms of international entrepreneurship. There is a clear need for a better climate for entrepreneurs and to stimulate internationalization, leading to increased productivity in both manufacturing and services (Flemish Foreign Affairs Council, 2010).

1.7 A different role for governments

An aging population, tensions between rich and poor and environmental issues call for a more active government intervention in the medium-long run. The financial crisis also changed public opinion, and governments are pushed to change regulations and stimulate growth. Proactive regulations and a well-functioning government are crucial for countries’ competitiveness. At the same time, supranational entities, including the EU, IMF and World Bank have become more important in coordinating and stabilizing the world economy (Bisson et al., 2010).
2. Belgium in a polycentric world

2.1 Belgium and globalization

According to the KOF-index, Belgium is the most globalized country for the combination of the three dimensions of integration: political, economic and social integration in the world (Konjunkturforschungsstelle, 2012). Belgium scores third on political globalization (collaboration between countries), and fifth on social globalization (flow of ideas and information). Belgium also scores fifth on economic globalization, measured in terms of trade flows\(^1\) and trade barriers\(^2\) (Table 1).

<table>
<thead>
<tr>
<th>Ranking</th>
<th>Country</th>
<th>Degree of economic liberalization</th>
<th>Actual Flows</th>
<th>Absence of restrictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Singapore</td>
<td>97,39</td>
<td>98,74</td>
<td>96,04</td>
</tr>
<tr>
<td>2</td>
<td>Luxembourg</td>
<td>94,63</td>
<td>100</td>
<td>89,26</td>
</tr>
<tr>
<td>3</td>
<td>Ireland</td>
<td>93,27</td>
<td>98,65</td>
<td>87,89</td>
</tr>
<tr>
<td>4</td>
<td>Malta</td>
<td>92,23</td>
<td>96,69</td>
<td>87,77</td>
</tr>
<tr>
<td>5</td>
<td>Belgium</td>
<td><strong>92,15</strong></td>
<td><strong>96,01</strong></td>
<td><strong>88,3</strong></td>
</tr>
<tr>
<td>6</td>
<td>Netherlands</td>
<td>91,91</td>
<td>94,23</td>
<td>89,58</td>
</tr>
<tr>
<td>7</td>
<td>Hungary</td>
<td>90,5</td>
<td>93,65</td>
<td>87,35</td>
</tr>
<tr>
<td>8</td>
<td>Sweden</td>
<td>88,98</td>
<td>88,68</td>
<td>89,27</td>
</tr>
<tr>
<td>9</td>
<td>Bahrein</td>
<td>88,96</td>
<td>96,51</td>
<td>81,42</td>
</tr>
<tr>
<td>10</td>
<td>U.A.E.</td>
<td>88,74</td>
<td>88,18</td>
<td>89,29</td>
</tr>
</tbody>
</table>


Other sources confirm Belgium’s pivotal role in the global economy. Ernst & Young’s Globalization Index ranks Belgium as the 4\(^{th}\) most globalized economy in 2011, after Hong Kong, Ireland and Singapore (Figure 1). Only the 60 largest economies (by GDP) are included in the analysis, thus leaving out highly globalized smaller economies including Luxembourg and Malta.

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\(^1\) Including balance of payments with FDI, trade and portfolio investments.

\(^2\) Including tariffs, hidden trade barriers, trade taxes and capital account restrictions.
E&Y’s criteria include the size and freedom of trade, capital flows, exchange of technology and ideas, labor mobility and cultural integration (Table 2). Belgium scores high on the internationalization of goods, services and capital, but much lower on cultural integration.

Table 2: E&Y Globalization Index

<table>
<thead>
<tr>
<th>Position</th>
<th>Country</th>
<th>Index 2011</th>
<th>Trade</th>
<th>Circulation of capital</th>
<th>Circulation of labor</th>
<th>Circulation of technology</th>
<th>Cultural integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hong Kong</td>
<td>7.42</td>
<td>9.8</td>
<td>7.4</td>
<td>4.6</td>
<td>6</td>
<td>9.3</td>
</tr>
<tr>
<td>2</td>
<td>Ireland</td>
<td>7.24</td>
<td>6.7</td>
<td>7.8</td>
<td>6</td>
<td>9.5</td>
<td>5.8</td>
</tr>
<tr>
<td>3</td>
<td>Singapore</td>
<td>6.88</td>
<td>10.0</td>
<td>6.2</td>
<td>4.4</td>
<td>6.5</td>
<td>6.9</td>
</tr>
<tr>
<td>4</td>
<td>Belgium</td>
<td>5.81</td>
<td>6.4</td>
<td>6.8</td>
<td>5.2</td>
<td>6.1</td>
<td>4.0</td>
</tr>
<tr>
<td>5</td>
<td>Sweden</td>
<td>5.72</td>
<td>5.4</td>
<td>6.0</td>
<td>4.4</td>
<td>8.4</td>
<td>4.0</td>
</tr>
<tr>
<td>6</td>
<td>Denmark</td>
<td>5.7</td>
<td>5.3</td>
<td>6.2</td>
<td>4.4</td>
<td>8.3</td>
<td>4.0</td>
</tr>
<tr>
<td>7</td>
<td>Netherlands</td>
<td>5.58</td>
<td>6.3</td>
<td>5.8</td>
<td>4.9</td>
<td>6.5</td>
<td>4.0</td>
</tr>
<tr>
<td>8</td>
<td>Switzerland</td>
<td>5.46</td>
<td>4.9</td>
<td>5.4</td>
<td>6.3</td>
<td>5.9</td>
<td>4.8</td>
</tr>
<tr>
<td>9</td>
<td>Finland</td>
<td>5.39</td>
<td>5.0</td>
<td>5.6</td>
<td>4.0</td>
<td>8.1</td>
<td>3.8</td>
</tr>
<tr>
<td>10</td>
<td>Hungary</td>
<td>5.19</td>
<td>6.4</td>
<td>5.1</td>
<td>4.5</td>
<td>5.7</td>
<td>3.8</td>
</tr>
</tbody>
</table>

Source: ERNST & YOUNG. The world is bumpy. 2012.
These findings by KOF and E&Y show Belgium’s integration in global economic, political and social systems. This implies Belgium strongly depends on developments in other countries, especially other EU countries. It is imperative that Belgian firms maintain or improve their position in world markets, since economic growth in Belgium is to a large extent determined by its international performance. However, the following paragraphs show that Belgium is losing market share in world markets.

### 2.2 Belgium is losing market share in global trade

With a foreign trade to GDP ratio of 90%, Belgium is one of the most open economies in the world, making Belgium particularly vulnerable to external shocks (ING, 2012). Belgium’s exports are largely determined by goods (€336 billion in 2011), with services only accounting for 22% of total export. In Europe, only Germany, Italy and the Netherlands have a lower share of services in total trade.

Emerging markets are becoming crucial trade partners and account for an increasing share in world import and export. This increasing competition pushes developed economies towards new activities and the development of new industries. Advanced economies are losing market share in global trade flows. The joint market share in export of goods of the US, EU-15 and Japan has dropped from 61% in 1995 to 37% in 2011. Over the past decade (2002-2011), Japan’s share in global export of goods dropped by 30%, whereas the US and EU lost about 23% of their market share. Over the same period, China’s market share doubled, and the new EU members increased their market share by 50%. Services export shows a similar evolution (Baugnet et al., 2012).

**Figure 2 Share of Belgium in world trade in goods (in %)**

![Figure 2](image1.png)

*Source: UNCTAD*

**Figure 3 Share of Belgium in world trade in services (in %)**

![Figure 3](image2.png)

*Source: UNCTAD*

Being part of this evolution, Belgium has lost significant export market share over the past ten years: 21% in goods (declining from 3.14% in 2002 to 2.62% in 2011) and 9% in services (declining from
2.30% in 2002 to 2.09% in 2011) (Figure 2 and Figure 3). This decline is similar to the average in the Eurozone (12 countries), but stronger than the one in the Netherlands and Germany. The Netherlands even maintained their market share in export of goods. This has been attributed to transit trade through the port of Rotterdam (Baugnet et al., 2012). In contrast, a similar impact is not observed for the port of Antwerp. Germany lost 15% in export of goods, with only a marginal decline in services export. Ireland and Luxembourg manage to partially compensate the loss in export of goods by a strong increase in services export.

![Figure 4 Change in share of world exports (2002 – 2011)](image)

Source: Own calculations, UNCTAD

### 2.3 Belgium’s export destinations

Tracking the evolution of Belgium’s export relative to the evolution of total import of its trade partners, Figure 5 shows that export from Belgium is growing slower than the import of our trade partners, pointing at a loss of market share. After an increase in market share in 2001 and 2002, Belgium has started to show substantial losses in market share. This loss of market share is greater than in most other Western European countries (Baugnet et al., 2012).
The relative decline in export share is not only the result of the market share gain by emerging markets, but is also due to structural and competitive factors. These structural factors include the limited focus on high growth countries and knowledge intensive activities. However, a study by the National Bank of Belgium suggests changes in geographical and sectoral structure of exports cannot fully explain the decline in market share (Baugnet et al., 2012). Table 3 shows that Belgium’s exports grow slower than those of the EU-12 countries (-1%). To analyze the nature of this difference, Belgium’s and the EU12’s hypothetical export volumes are calculated, assuming export growth would equal the growth of import markets. The second row in Table 3 shows how much exports would increase if they would grow at the same pace as the imports of their trade partners (weighted by their share in Belgium’s exports, or EU12 exports). The difference in geography of exports of Belgium only accounts for less than one third of the difference with EU-12. Row three does the same analysis for the product mix. Here, the difference is only one fifth. This means that, assuming away unfavorable product mix and country combinations, only half of the 1% difference between Belgium and the EU-12 can be explained by Belgium’s market mix (0.3%) and product mix (0.2%), i.e. by the relative focus on slow growing countries and industries in the export structure.
Table 3 Comparison of growth in exports, export markets and market shares
(goods in value, average growth rates per year, 1995-2008)

<table>
<thead>
<tr>
<th></th>
<th>Belgium</th>
<th>EU-12</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exports</td>
<td>5,40%</td>
<td>6,50%</td>
<td>-1,00%</td>
</tr>
<tr>
<td>Export markets by country</td>
<td>8,10%</td>
<td>8,40%</td>
<td>-0,30%</td>
</tr>
<tr>
<td>Export markets by product</td>
<td>8,20%</td>
<td>8,40%</td>
<td>-0,20%</td>
</tr>
</tbody>
</table>

Source: BAUGNET et al., ‘Positie van België’.

The part that cannot be explained by this product and market mix is the result of other internal factors, or more generally Belgium’s competitive position in world markets. The loss in competitiveness results in a loss of market share in Belgium’s traditional export markets. Tables 4 and 5 show the European markets where Belgium is gaining and losing market share.

Table 4 Top 5 Western European³ markets in which Belgium lost market share (2004-2010)

<table>
<thead>
<tr>
<th>Goods</th>
<th>Country</th>
<th>Loss of Belgian market share</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Luxembourg</td>
<td>-3,21%</td>
</tr>
<tr>
<td>2</td>
<td>Netherlands</td>
<td>-1,90%</td>
</tr>
<tr>
<td>3</td>
<td>Germany</td>
<td>-1,47%</td>
</tr>
<tr>
<td>4</td>
<td>Italy</td>
<td>-0,84%</td>
</tr>
<tr>
<td>5</td>
<td>Spain</td>
<td>-0,81%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Services</th>
<th>Country</th>
<th>Loss of Belgian market share</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Luxembourg</td>
<td>-4,67%</td>
</tr>
<tr>
<td>2</td>
<td>Norway</td>
<td>-1,02%</td>
</tr>
<tr>
<td>3</td>
<td>Netherlands</td>
<td>-0,85%</td>
</tr>
<tr>
<td>4</td>
<td>Ireland</td>
<td>-0,18%</td>
</tr>
<tr>
<td>5</td>
<td>Germany</td>
<td>-0,05%</td>
</tr>
</tbody>
</table>

Source: Eurostat, UNCTAD, own calculations

Table 4 shows that three neighbors (Luxembourg, the Netherlands and Germany) are among the top 5 countries in which Belgium is losing market share, both in goods and services.

³ Defined as EU-15 and EFTA.
Table 5 Top 5 Western European\(^4\) markets in which Belgium gained market share (2004-2010)

<table>
<thead>
<tr>
<th>Goods</th>
<th>Country</th>
<th>Increase of Belgian market share</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Finland</td>
<td>0,52%</td>
</tr>
<tr>
<td>2</td>
<td>Iceland</td>
<td>0,33%</td>
</tr>
<tr>
<td>3</td>
<td>Ireland</td>
<td>0,20%</td>
</tr>
<tr>
<td>4</td>
<td>Norway</td>
<td>0,17%</td>
</tr>
<tr>
<td>5</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Services</th>
<th>Country</th>
<th>Increase of Belgian market share</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Switzerland</td>
<td>2,26%</td>
</tr>
<tr>
<td>2</td>
<td>France</td>
<td>1,45%</td>
</tr>
<tr>
<td>3</td>
<td>Portugal</td>
<td>0,97%</td>
</tr>
<tr>
<td>4</td>
<td>Italy</td>
<td>0,51%</td>
</tr>
<tr>
<td>5</td>
<td>Iceland</td>
<td>0,49%</td>
</tr>
</tbody>
</table>

Source: Eurostat, UNCTAD, own calculations

3. Belgium’s export geography

Belgium’s economic growth heavily depends on its export performance, which, in turn, as illustrated in the previous section, depends on the sectoral and geographic structure of the export, and the competitive position of Belgian firms on world markets. A breakdown of the evolution of Belgium’s export per market and industry shows the extent to which each of these factors determines the evolution of export.

3.1 Geographic specialization: Belgium is not oriented towards growing markets

EU member states account for the bulk of Belgium’s exports, accounting for 73% of export of goods in 2010 and 68% of export of services. Intra-EU trade flows account for a large share of export in all EU countries (WTO, 2011). However Belgium’s exports of goods and services are less oriented towards countries outside the EU than the exports from Germany, France, the UK or the Netherlands. Focusing on some rapidly growing markets (BRICs and Next-11\(^5\)), Figure 6 and Figure 7 show that the neighbor countries outperform Belgium in terms of exports to the countries with a high growth potential. This unfavorable trade structure limits the growth potential of exporting Belgian firms.

\(^4\) Defined as EU-15 and EFTA.

\(^5\) The Next-11 are Mexico, Nigeria, Egypt, Turkey, Iran, Pakistan, Bangladesh, Indonesia, Vietnam, the Philippines, South Korea. Goldman Sachs, 2007.
Belgium has not been able to reduce this gap and to increase its orientation towards high growth markets. We can observe a widening gap with Germany (Figure 8). A somewhat more favorable trend can be observed for services exports. In 2004, the BRIC countries’ share in services exports was seven times higher in the Netherlands compared to Belgium. Although the distance between Belgium and its neighbors has decreased recently, the gap remains wide.
Despite the clear upward trend in exports to emerging markets since 2008 (Figure 8), Belgium has not gained market share in these countries (Figure 10). The increase of export to BRIC countries from 4.8% in 2008 to 6.6% in 2012 is primarily the result of growing demand in these countries. In fact, the share of Belgian goods in the import of Brazil, Russia, India and China did not increase over the same period.

Belgium’s strong focus on EU countries is in part determined by its product specialization. Figure 11 relates the share of extra-EU export in total export to the share of high tech export in total extra-EU export. Belgium scores low on both dimensions, indicating that exports are not only focused on the European market, but those exports outside the EU-27 are less technology intensive products when compared to other EU countries’ exports.
3.2 Product specialization

Belgium is mainly specialized in chemicals, pharmaceuticals, steel, food and automotive products (Figure 12). These sectors have an above average market share, as shown by the horizontal line in the graph. This focus has increased over the past ten years. Belgium gained export market share in 4 out of 16 broad industries, with only chemicals and pharmaceuticals growing substantially. Some other innovative industries, including electronics, machinery, ICT and office equipment, have lost market share. As a result, Belgium’s export of innovative products increasingly depends on a limited number of product groups.
Figure 12. Percentages of Belgium in world exports by product, 2000-2010.

Source: UNCTAD

Figure 13 contrasts the export growth of Belgium and the EU-15. In Belgium, chemicals and minerals have been growing faster than the EU average. In most services sectors Belgium has gained market share between 2000 and 2011 (Figure 14). In IT services export growth was below the EU-15 average. Belgium’s export of financial services (including banking) even declined between 2000 and 2011.
A country’s export structure has important implications for the growth of countries. Highly developed countries tend to specialize more in highly productive activities and products with a high degree of knowledge and intangible asset intensive content. These countries have high export productivity. Stronger specialization in these types of activities and products has been shown to lead to higher future growth (Hausmann et al., 2007).

Following this logic, Hausmann et al. (2007) developed an export sophistication index, reflecting the degree to which a country’s export structure matches that of highly developed countries. Comparing the export sophistication of European countries, Minondo (2008) found that Belgium’s exports were 1% less sophisticated than those of France, 7% less than Germany, and 20% less than Ireland (Figure 15).
The evolution of Belgium’s export sophistication in services was analyzed using a dynamic sophistication measure (Mishra et al., 2011). Belgium’s services export sophistication slowly increased between 2002 and 2009, but stays substantially below the index values of Ireland and the UK (Figure 16).


Figure 16 Sophistication of exports of services (2002-2009)

(Quality-adjusted dynamic EXPY)

Source: OESO
3.3 Belgium should be more active in technology and knowledge intensive industries

Comparing Belgium’s export per industry with the Eurozone again shows a strong export performance in chemicals and pharmaceuticals (Figure 17). Both industries have high innovation levels. In contrast, Belgium’s strong performance in other industries is not characterized by a high R&D intensity, e.g. in minerals, fuels, steel and textiles. Belgium scores low in some other R&D intensive industries, including machinery, telecom, electronics and office equipment.6

![Figure 17 Shares of goods exports by product: Belgium compared to Eurozone-12 (% difference of share) (2010)](chart17)

![Figure 18 Shares of services exports by product: Belgium compared to Eurozone-12 (% difference of share) (2010)](chart18)

Source: WTO

Many developed economies specialize in high tech and knowledge intensive goods and services, which are expected to contribute most to growth (Hausmann et al, 2007). Belgium, however, does not appear to be strongly focused on these industries (Figure 19). Although the share of high tech products in total exports has increased over the past decade, Belgium is still ranked 11th out of EU-15 countries in terms of its share of high tech exports. Similar data for services are not available. However, as shown in figure 20, Belgium scores somewhat better in terms of its share of employment in knowledge intensive services.

4. Who exports? A morphological approach

4.1 The role of multinational enterprises in Belgium

Subsidiaries of foreign multinational enterprises (MNEs) are particularly important in Belgium’s internationalization. In a large number of industries, including petroleum, chemicals, pharmaceuticals, metals and electronics, MNEs play a dominant role. MNEs are less prominent in services sectors, except for an important presence in financial and ICT services. MNEs can combine Belgium’s location specific advantages with their own technological advantages, which can be internally transferred to Belgium. E.g. in chemicals, firms can combine their technological advantage with Belgium’s strong logistics infrastructure, making Belgium an important hub and export platform in their global network (upper right quadrant in Figures 21 and 22).

Location advantages are industry specific and can change over time. If the location advantage evolves negatively, or disappears, it can turn an industry’s export surplus into a deficit. In such cases with many MNEs present, the industry would be positioned in the lower quadrants of Figure 21. The right lower quadrant has the highest risk of relocation. If local markets are important, firms may stay, but on a limited scale. In 2009, motor vehicles, IT products and transportation equipment were
in this lower quadrant (figure 22). The evolution of motor vehicles was particularly negative, as it still had a trade surplus in 2000.

Industries with a limited presence of foreign MNEs and in which Belgian firms cannot generate a trade surplus, are positioned in the lower left quadrant. Firms in this quadrant are typically Belgian firms, with a limited presence on the Belgian market. Many firms in these industries have already disappeared, by exiting the market of relocating activities abroad. Industries like clothing, printing, wood, paper and travel are in this quadrant.

The upper left quadrant combines a strong position on international markets, mainly driven by Belgian indigenous firms. These industries are characterized by competitive advantages strongly rooted in the Belgian business context often related to specific location advantages. In e.g. the food industry, tradition and quality of Belgian products. Combining this competitive strength with locally developed technological knowledge and innovations enables locally embedded firms to become important drivers of exports. Other industries in this quadrant include textiles, metal products and a large number of services sectors (Figures 22 and 23).
Figure 22 Foreign subsidiaries and export surplus – goods (2009)
(Circle size represents the share in Belgian total export, in value)

Source: OESO, NACEBEL, own calculations

Figure 23 Foreign subsidiaries and export surplus - services (2009)
(Circle size represents the share in Belgian total export, in value)

Source: Eurostat, NACEBEL, own calculations
In services we see exports of Financial products and software mainly driven by subsidiaries of foreign based MNEs. Sea transport and postal services still have a strong domestic core. The negative position of travel services deserves more attention.

4.2 Belgium as middleman

An substantial portion of international trade is trade within firms (intra-firm trade) and trade with independent partners abroad. Manufacturing, trade and investment activities related to goods and services are organized in global value chains, in which different stages of design manufacturing and distribution are spread across different countries. Intermediate inputs, including services, are produced in one country and exported to another for further processing or production of final goods. This functional and geographical fragmentation of value chains determines the economic interdependence of firms and countries. The increasing importance of intermediate goods and offshoring implies that a country’s competitiveness for certain types of goods and services no longer solely depends on local activities and resources, but also on supply from other countries (Sturgeon en Gereffi, 2009). Countries and firms become increasingly specialized in certain activities, rather than production of certain goods or services.

Figure 24 Intermediate goods in Belgian imports (1995-2011)

![Figure 24](image1)

Source: NBB

Figure 25 Intermediate goods in Belgian exports (1995-2011)

![Figure 25](image2)

Source: NBB
A recent OECD study shows that Belgium is one of the most vertically specialized countries in the world, importing and processing a large volume of intermediate inputs (De Backer et al. 2012). The share of intermediate goods and services in Belgian trade has drastically increased over the past fifteen years (Figures 24 and 25). Foreign intermediate goods have gained importance in total intermediate goods. Belgium also has the highest share of products and services that are processed as intermediate goods abroad (figure 26). This makes Belgium a “middleman” in international trade, similar to Thailand, Malaysia and Taiwan (Conference Board of Canada, 2012; Bernard et al., 2010).

The vertical specialization not only depends on the presence of foreign MNEs in Belgium, Belgian firms also increasingly import and export intermediate goods and services. The increasing specialization in global value chains implies that finished goods are becoming less important in Belgium’s export. This evolution creates an important challenge for Belgian firms to maintain their share of value added in global value chains. Among the world’s largest exporters, Belgium has a relatively low share of generated value added in total export (Figure 27 shows Belgium’s extreme position). Belgium’s export to GDP ratio is much larger in the conventional sense (total value of export: 89%) than measured in terms of value added export (44%). Looking at value added trade, Belgium’s openness would be substantially lower (Conference Board of Canada, 2012).
To stimulate value added export, Belgium needs to remain attractive for knowledge intensive activities, in which human capital and intangible assets are important. From an export supporting policy, this also entails an increasing importance for B2B approach of export promotion.

Figure 27 Value added of exports (2004)
(circle size represents the total trade by country, in value)

Source: Conference Board of Canada, gtap
5. Large versus small firms

The previous chapter gave evidence of the openness of the Belgian economy, which has one of the highest export/GDP ratios in the world. This export is concentrated among a limited number of large enterprises, in many cases affiliates of large multinationals. Of all exporting firms in Belgium, 10% account for 84% of all export of goods. SMEs on the other hand play a less prominent role in the total export of goods from Belgium. Although SMEs account for 70% of GDP and private employment in Belgium, their share of 45% of total export is smaller.

Despite this limited share in total export, SMEs are an important driver of export growth. The contribution resulting from an increase in the number of exporting firms – mainly SMEs – is important for Belgian export growth. The export growth resulting from this increase (i.e. the extensive margin) is larger than the export growth of incumbent exporters (Mayer and Ottaviano, 2007). Export is not only important from a macro perspective, firms also benefit from exporting. A large number of studies have shown that exporters are more productive, pay higher wages and grow faster than domestic firms (Bernard en Jensen, 1999; De Loecker, 2007). Similar to exporting, importing from abroad also has an important positive impact on firms’ productivity and survival chances (Coucke and Sleuwaegen, 2008).

To analyze the importance and evolution of exporting firms in Belgium, we constructed a data set in collaboration with the National Bank of Belgium (NBB), based on information from the annual accounts and trade data. This analysis mainly focuses on trade of goods, since data on trade in services is no longer systematically collected as of 2006. We included all firms incorporated in Belgium that employed at least 10 employees (at least one year in the observation period). This thus excludes micro enterprises employing less than 10 full time equivalent (FTE) employees. We track the import and export of these firms over the period 1998-2010. Linking the trade data to the balance sheet and income statement data allows us to analyze the impact of these exporters on employment and value added creation. Particular attention is paid to firms that start exporting. We also contrast SMEs (small and medium sized firms, employing less than 250 FTE employees) and large firms.

The data set contains data on all export transactions of goods outside the EU with a value of minimum €1000. Information on trade within the EU is collected through the Intrastat inquiry. All firms exporting more than €250,000 per year, between 1998 and 2005, had to report this export. As
of 2006, the threshold is €1 million. This results in a decrease in the number of firms reporting Intra-EU export. In addition, the EU enlargement (accession of important trade partners such as Poland and Czech Republic in 2004) also lowered the number of firms reporting export, since the threshold for these countries increased from €1000 to €1 million.

Figure 28 shows the percentage of SMEs reporting export within and outside the EU. For extra-EU export, the number gradually declines from about 23% in 2000 to 20% in 2010. For intra-EU trade, however, there is a clear drop in the number in 2006. Until 2005, the number was stable at 21% of SMEs, as of 2006 only about 14% of SMEs reported intra-EU trade.

![Figure 28: Share of SMEs reporting intra-EU and extra-EU export (%)](image)

A limited number of large firms (5% of all exporters) accounts for more than half of trade in goods (Table 6). Despite the limitations of the data; i.e. dropping of small exporters, total export by SMEs increased between 2000 and 2010. There is a sharp decline in the number of exporting SMEs (-30%), resulting from the increased thresholds. Despite this drop, total SME export increased by 30%. This makes the average export per SME to increase by 84%. The number of large exporters was stable. Their average export increased by 26 per cent. The share of SMEs in total export was 45% in 2010.
Table 6: Export of SMEs and large firms (€ million)

<table>
<thead>
<tr>
<th></th>
<th>SMEs</th>
<th>Large firms</th>
<th>% SMEs in total export</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td># firms</td>
<td>total export</td>
<td># firms</td>
</tr>
<tr>
<td>2000</td>
<td>10,167</td>
<td>54,511</td>
<td>570</td>
</tr>
<tr>
<td>2005</td>
<td>9,732</td>
<td>54,033</td>
<td>555</td>
</tr>
<tr>
<td>2010</td>
<td>7,165</td>
<td>70,800</td>
<td>571</td>
</tr>
<tr>
<td>Δ 00-10</td>
<td>-30%</td>
<td>30%</td>
<td>0%</td>
</tr>
</tbody>
</table>

SMEs and large firms both account for about half of the total increase in trade in goods (Table 7). Among large firms, this growth is mainly driven by existing exporters. In contrast, SMEs’ export growth primarily results from firms that start exporting. These newly exporting SMEs account for 90% of export created by newly exporting firms.

Table 7: Export growth (2000-2010, € million)

<table>
<thead>
<tr>
<th></th>
<th>Δ total</th>
<th>Δ SMEs</th>
<th>Δ Large firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>continue export</td>
<td>31,120</td>
<td>12,460</td>
<td>18,660</td>
</tr>
<tr>
<td>start export</td>
<td>31,521</td>
<td>28,510</td>
<td>3,011</td>
</tr>
<tr>
<td>stop export</td>
<td>-28,103</td>
<td>-23,830</td>
<td>-4,273</td>
</tr>
<tr>
<td>total</td>
<td>34,538</td>
<td>17,140</td>
<td>17,398</td>
</tr>
</tbody>
</table>

In addition to driving export growth, SMEs also account for an important share in value added growth in Belgium (Table 8). The SMEs in our data set (i.e. excluding micro firms employing fewer than 10 employees) account for 75% of value added growth. The fastest value added growth is for firms that started exporting between 2000 and 2010.

---

7 The numbers in Table 7 do not exactly match those in Table 6. Table 6 shows the total export of the respective populations of SMEs and large firms in a given year. Whereas Table 6 is a static representation of a given year, Table 7 reflects the dynamics based on the situation in 2000. A firm that was classified as an SME in 2000, and as a result of its growth no longer qualifies as an SME in 2010 (i.e. has more than 250 employees), would be included in the large firms in 2010 in Table 6, but still be treated as an SME in Table 7.

8 Continue export: firms exporting in 2000 and 2010. Start export: firms not exporting in 2000 and exporting in 2010. Stop export: firms exporting in 2000 and not exporting in 2010. This includes firms that have ceased to exist, firms that are still active and no longer exporting, and firms that still export, but only within the EU and do not exceed the threshold of €1 million for Intrastat trade.
Table 8: Evolution value added (2000-2010, € million and %, including new firms)

<table>
<thead>
<tr>
<th></th>
<th>SMEs</th>
<th>Large firms</th>
<th>% SMEs in total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Δ total</td>
<td>Δ</td>
<td>Δ (%)</td>
</tr>
<tr>
<td>continue export</td>
<td>18,390</td>
<td>10,940</td>
<td>57%</td>
</tr>
<tr>
<td>start export</td>
<td>13,761</td>
<td>11,173</td>
<td>444%</td>
</tr>
<tr>
<td>stop export</td>
<td>-10,361</td>
<td>-7,763</td>
<td>-61%</td>
</tr>
<tr>
<td>no export</td>
<td>21,365</td>
<td>18,110</td>
<td>110%</td>
</tr>
<tr>
<td>total</td>
<td>43,155</td>
<td>32,460</td>
<td>55%</td>
</tr>
</tbody>
</table>

Table 9 shows the job creation by SMEs and large firms. The number of employees in large firms increased by 3 per cent, mainly in firms that are not exporting and in newly exporting large firms. SMEs that are not exporting are not only the largest group in number, but also account for the largest increase in employment. Nevertheless, newly exporting SMEs also created a large number of new jobs, and show the fastest employment growth. A large number of jobs is lost in SMEs that stopped exporting.

Table 9: Evolution employment (2000-2010, FTE and %, including new firms)

<table>
<thead>
<tr>
<th></th>
<th>SMEs</th>
<th>Large firms</th>
<th>% SMEs in total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Δ total</td>
<td>Δ</td>
<td>Δ (%)</td>
</tr>
<tr>
<td>continue export</td>
<td>-13,949</td>
<td>28,790</td>
<td>11%</td>
</tr>
<tr>
<td>start export</td>
<td>124,934</td>
<td>101,686</td>
<td>259%</td>
</tr>
<tr>
<td>stop export</td>
<td>-183,177</td>
<td>-141,943</td>
<td>-70%</td>
</tr>
<tr>
<td>no export</td>
<td>343,864</td>
<td>265,719</td>
<td>81%</td>
</tr>
<tr>
<td>total</td>
<td>271,671</td>
<td>254,251</td>
<td>26%</td>
</tr>
</tbody>
</table>

5.1 Newly exporting SMEs

8,483 SMEs started exporting between 1998 and 2010. This includes new firms that start exporting as well as incumbent firms that start selling abroad after years of solely focusing on the domestic market. Based on the timing (early or late: within 5 years of inception, or after more than 5 years)

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9 Not all these firms continue exporting. Many SMEs are not highly committed to internationalization and export on an ad hoc basis, and 18% of newly internationalizing SMEs no longer report exports in 2010. In addition, a number of firms are no longer active in 2010, either as a result of a take-over, or complete cessation of activities.
and the scope of export (global: at least five countries, including export outside the EU; or narrow: fewer than 5 countries), we distinguish between four types of newly exporting SMEs (Figure 29).

The most radical form of internationalization are the “Born Global” type of firm (19% of newly exporting SMEs). These firms start exporting to a large number of countries soon after inception (within five years), also outside the EU. A second group of young firms, the “Born Internationals” (31%), also start exporting at an early age, but focus on a limited set of countries (fewer than 5). The largest group of newly exporting SMEs follows a more traditional export pattern. These “Traditional Exporters” (49%) are incumbent firms that start exporting after years of selling only on the domestic market. Their export is limited to a small number of countries, in most cases neighboring countries. Finally, a small number of “Born-again Global” firms (2%) are older firms that start exporting, but focus on the world market and follow a strategy similar to Born Globals.

*Due to the increased thresholds, we observe a sharp decline in the number of newly exporting SMEs after 2005. 1408 of the 1583 Born Globals are established between 1993 and 2005 (on average 108 per year), and only 175 between 2006 and 2010 (35 per year). 2372 Born internationals were established between 1993 and 2005 (182 per year on average) and 231 after 2005 (46 per year). An additional limitation of the dataset results from the right censoring of newly established SMEs. Until 2005, all newly established SMEs are observed for at least five years, and can start exporting in any of those five years. Those that were created after 2006, are only observed until 2010 (right censored) and must start exporting in a shorter time frame. As a result, only 2 born globals and 5 born internationals were created in 2009 or 2010. These firms started exporting immediately after inception. Late exporters (i.e. traditional exporters and born-again globals) were all established
before 2006. Nevertheless, for those that started exporting after 2005, their numbers are also underestimated, because of the increased thresholds and the accession of new EU member states in 2004.

Born globals are overrepresented in technology intensive and globalized industries. (Fernhaber, McDougall and Oviatt, 2007). Traditional exporters frequently operate in low tech and less globalized industries (Onkelinx en Sleuwaegen, 2010). A more fine grained industry analysis (nacebel 2 digit) shows substantial differences in number and share of born globals across industries.

Figure 30 shows the share of born globals in the number of newly exporting SMEs (horizontal axis) and the industry globalization index\(^{10}\) (vertical axis). The size of the bubble represents the number of born globals in the industry. Telecom equipment, textile and chemicals have the highest percentage of born globals. The latter two are also important in terms of the absolute number of born globals. Machinery, metal products and food also have a large number of born globals. However, these industries also have large numbers of new exporters following a more traditional internationalization strategy.

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\(^{10}\) To analyze which of these strategy types are more common in globalized industries, we constructed an industry globalization dummy. This dummy is based on the share of total industry trade (import and export) in total industry sales, and the share of industry extra-EU trade in total industry trade. Industries with a share of trade greater than 45% and a share of extra-EU trade greater than 17% were classified as globalized, all other industries were local. We thus found 16 globalized industries in 2005 (nacebel 2 digit), or 29% of all industries.
5.2 Distribution of value added and employment among newly exporting SMEs

Among the newly internationalizing SMEs, born globals are the largest of the four types, not only in terms of export scope, but also in employment, value added and sales (Onkelinx and Sleuwaegen, 2010). Whereas only 19% of newly exporting SMEs were born globals, they accounted for 36% of value added and 28% of employment at the end of the observation period in 2010. Traditional exporters’ share in employment and value added was much lower than their share in the number of newly exporting SMEs (Table 10).

<table>
<thead>
<tr>
<th></th>
<th>Born global</th>
<th>Born international</th>
<th>Traditional exporter</th>
<th>Born-again global</th>
</tr>
</thead>
<tbody>
<tr>
<td># firms</td>
<td>19%</td>
<td>31%</td>
<td>49%</td>
<td>2%</td>
</tr>
<tr>
<td>Value added</td>
<td>36%</td>
<td>34%</td>
<td>28%</td>
<td>2%</td>
</tr>
<tr>
<td>Value added per employee</td>
<td>122,860</td>
<td>92,404</td>
<td>77,383</td>
<td>78,272</td>
</tr>
</tbody>
</table>

Born globals not only accounted for the largest share of value added, they also had the highest (value added) productivity among newly exporting SMEs. In 2010, born globals’ value added per employee was 30% higher than the average newly exporting SME (Table 10).

5.3 Two-way trade: import and export

Born globals’ internationalization is more than export. A large majority of these firms (86%) are two-way traders: they also import goods. Born-again globals also have a high share of two-way traders (68%). Born internationals (50%) and traditional exporters (28%) are less active in foreign sourcing. Two-way traders are more productive and spend more on research and development (R&D) than firms that only export (Muuls & Pisu, 2007). Firms that evolve from only import or export to two-way trade, grow faster in sales, value added, employment and productivity (Onkelinx & Sleuwaegen, 2010).
5.4 Trade in services

Almost all born globals also export (96%) and import (88%) services. Born-again globals are also very active in services trade. Export and especially import of services is less common among born internationals and traditional exporters (Figure 32).

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11 Thresholds for reporting services trade were lower than those for trade in goods: until 2005, all transactions of more than €12,500 were to be reported, compared to a threshold of €250,000 for goods in the Intrastate inquiry.
5.5 Other modes of internationalization

In addition to import and export, Belgian firms also internationalize via foreign direct investment, joint ventures, licensing and other forms of international collaboration. European studies have shown than Belgian SMEs use these other modes of internationalization more frequently than SMEs in any other European country (European Commission, 2007a; 2007b). About 11% of Belgian SMEs report income from foreign subsidiaries, compared to the EU average of only 4%. Three per cent of SMEs in the EU, and ten per cent of SMEs in Belgium report income from foreign joint ventures (European Commission, 2007b).

5.6 Survey results

From recent survey results originating from a small, but representative sample of 50 exporting SMEs we found significant differences in performance between SMEs exporting niche products versus those exporting mass products (Onkelinx en Sleuwaegen, 2010). SMEs with niche products also have different internationalization strategies than SMEs selling mass products (Onkelinx and Sleuwaegen, 2011). To link the earlier survey results with the results discussed in this report we analyzed if the distinction between types of exporters (born global versus traditional exporter) also matters for the surveyed SMEs. We found born globals to be mainly niche players. Nevertheless, some traditional exporters are also exporting niche products, and a number of born globals sell mass products (Figure 33).

Figure 33: Main export product of SMEs

![Figure 33: Main export product of SMEs](image)
Born globals spend more on R&D than traditional exporters. The share of very R&D-intensive (more than 4% of turnover) born globals is 36%, compared to 18% of traditional exporters. A small number of born globals (7%) do not report any R&D spending.

Figure 34: R&D spending exporting SMEs (% of sales)

Many traditional exporters (40%) reactively start exporting, responding to an unsolicited order from abroad (Figure 35). Born globals are more proactive and actively look for opportunities in foreign markets (55%). Born globals also started their internationalization following local partners with foreign operations (18%) or collaborating with foreign partners (18%).

Figure 35: Start of international operations
Born globals (Figure 36) as well as traditional exporters (Figure 37) mainly need support in identifying foreign partners, market research and information on foreign markets. About two thirds of respondents indicated they needed support on these two aspects when starting their international operations. However, only a limited number of these SMEs also received this type of support. In contrast to partner identification, there is no gap in between need for support and received support in terms of facilitating contacts with foreign partners. Also promotional support (e.g. trade fairs) seems to match the need for this type of support.

Newly internationalizing SMEs appear to have largely similar needs for support. Still, on some aspects there are marked differences between born globals and more traditional exporters. Networking with domestic entrepreneurs that have international operations is valued higher by traditional exporters compared to born globals. Developing international business skills on the other hand, is of greater importance for born globals. Born globals also need more support dealing with export formalities.
In sum, the survey results despite the fact that they are based on a very small sample of firms are consistent with the view that born globals make up a very dynamic set of firms, which basically see the world or significant part of it as their relevant market. The majority are innovative firms spending significant resources on the development of new (niche market) products.

6. Some policy implications

Opportunities for growth remain underexploited in many emerging markets (European Commission (2011)). The European Commission pushes governments to play a more active role in helping firms overcome the barriers of internationalization. Small and medium sized enterprises (SMEs) in particular benefit from public policy support, given their limited resources. However, only 7% of internationalized SMEs use available support mechanisms, calling for a greater awareness of support initiatives (European Commission (2011)). A very large group of firms also never considered internationalization, basically because of lacking to see the strategic value of expanding into foreign markets (EC, 2006).

Public support is often offered based on what is administratively most convenient and feasible, rather than starting from the needs of internationalizing firms, leading to gaps in support. The European Commission has identified the following gaps in policy support:

- Finding human resources in certain countries
- Information on business climate, especially in countries with an unstable legal climate
- An online information portal with reliable, consistent and up to date info
- Information on opportunities at a regional level
- Lack of matchmaking events
- Lack of coordination between organizers of trade missions
- Help in finding reliable business partners
- Avoiding multiple initiatives supporting the same goals
- Support in developing management capabilities
- Tailored support that can be adjusted based on evolving needs of SMEs (different phases of development, industries, target markets etc.)
- Monitoring and evaluation mechanisms to ensure improvement of support

Ideally, support should be based on the following principles. First, support should start from the firm’s perspective, analyzing its specific needs and management vision. Support should also be bundled and provided through a directly accessible point of contact. Second, support should only be offered if it is not available in the market. Third, support should be cost efficient (European Commission, 2011).

In line with these recommendations this report, focusing on Belgian exporting firms and specifically Belgian SMEs, identified additional needs for support that are only partially met by the existing set of measures. Especially needs concerning studies about adaptations of the product or business model to foreign markets, the identification of foreign partners and support concerning market research remain important issues. ‘Born globals’ have a larger need for support in the area of building up managerial internationalization competences and foreign market regulations. Traditional exporting firms have a more important need for domestic networking with internationally experienced firms.

In a growing number of countries specific measures have been taken to better support rapidly internationalizing firms, the so-called born globals and born internationals. Interesting cases are Finland, Ireland and Denmark. Export support of Finnish SMEs starts from a profound analysis of the firm and is followed by a customized support package, including a co-developed export strategy and development plan. Ireland focuses on improving the climate for high growth entrepreneurship and offers integrated support packages in this regard. Ireland is also attracting entrepreneurs from abroad to use Ireland as an international platform for the international development of their business. Denmark offers a wide array of services regarding market research, innovation for
international markets, foreign partner identification sourcing from abroad, starting up foreign entities and recruiting international personnel. Aid to Finnish SME’s is based on a thorough analysis of the firm, followed by an export strategy and development program taking into account the products, countries and competition strengths. In Ireland the improvement of business climate is an important policy goal. Many initiatives are directly intended for entrepreneurs with a potential for growth. These should not only stimulate Irish firms, but steps are also being taken to attract foreign entrepreneurs and start-ups with a large growth potential. Denmark offers strategic advice, apart from services in market analysis, partner identification, start-ups of production abroad, and attracting human resources abroad. There are also initiatives meant to promote innovation, and support in sourcing.

Based on the results of this report and the experiences from abroad some general policy guidelines to the business community as well as to public authorities can be formulated.

To the business community:
- Make international expansion part of the strategy from the start.
- Pro-actively analyze if an expansion abroad to a well-defined set of countries fits with the business model of the company and can create extra competitive advantage.
- Analyze which extra costs, benefits and risks the expansion abroad entails, including the costs of adapting the business model to foreign market conditions.

To public authorities:
- Focus on companies that are not yet internationally active.
- Inform companies about the advantages, costs and risks of expanding abroad.
- International competitiveness: improve business climate and stimulate innovation and internationalization with a coherent policy.
- Develop a cluster policy (including infrastructure and legal frameworks), supporting the interaction between multinational enterprises and local firms, and aimed at value creation in international value chains.
- Analyze the potential for internationalization within industries, especially the services industries.
- Organize private-public partnerships for a more effective export and investment promotion support.
- Develop an expertise center and management development programs for supporting companies which are interested in internationalizing (part of) their business (cf. recent VBO-FEB initiative).
- Provide specific support programs to companies that are newly founded and aim at rapid international growth.
- Develop extensive (credit) guarantee and risk insurance programs to reduce the risk of going to (risky) foreign countries.
PART 2 – Internationalization of value chains

After studying the export of goods and services in the first part, the second part of the study sheds light on the internationalization of firms’ value chains through sourcing (or import) of services from foreign countries. There is a strong theoretical background supporting the fact that international sourcing could lead to productivity gains for firms (Amiti and Wei, 2006; Cheung et al., 2008):

- Offshoring less efficient processes allows firms to concentrate on more productive activities.
- Cheaper foreign inputs free up resources to allocate to productivity-enhancing core business.
- International sourcing typically goes hand in hand with the restructuring of processes to improve efficiency.
- Foreign inputs may be of greater quality, variety or availability.

However, international sourcing also entails a number of challenges that may prevent firms from realizing the expected gains.

Data from input-output tables and other official sources typically used in studies on services imports do not give any information on the nature of international sourcing practices and associated benefits. To pall this drawback, between March and May 2012 we have collected fine grained data on international sourcing practices of 80 companies that operate in Belgium. Combining those with survey data collected by the Offshoring Research Network (ORN) in Europe and the United-States, we are able to provide a detailed picture of international sourcing trends in Belgium, as well as discuss the impact and challenges of international sourcing for Belgian firms as compared to European neighbors and the United States.

1. The structure of material and service imports in Belgium

For a long time companies have sourced value chain activities from foreign countries. Starting with manufacturing work and blue-collar jobs as early as the 1960s, shifting production or assembly operations to low-wage countries has enabled firms from high-cost economies to align their cost structure with global competitors. Since the 1990s, companies have started to also import business services. Initially, these services were limited to highly-codified, transactional work such as credit card processing, claims administration, and call center functions, as well as routine software development. In a later stage, international sourcing of services involved more complex and value-adding activities (e.g., finance and accounting, mortgage, and other back-office functions). Today,
companies are offshoring functions that have traditionally been considered “core” to their business, including chip design, financial and legal research, clinical trials, and book editing (e.g. Lewin and Peeters, 2006; Lewin, Massini and Peeters, 2009).

Data from the Federal Planning Bureau for the period 1995-2007 (Avonds et al., 2012; Hertveld and Michel, 2012) show that, yet relatively limited in regard with total inputs imported, the import of service inputs is growing rapidly and faster than the import of material inputs (see Figure 38). Compared with 46% of imported material inputs, imported service inputs represented only 8% of total inputs in 2007. But the share of imported service inputs doubled between 1995 and 2007 while the share of imported material inputs grew by only 12%. Figure 39 further shows that the growth in import of service inputs comes primarily from firms active in services industries while manufacturing firms account for the majority of imported material inputs. In terms of origin of the imported inputs, the fast growth of BRIC economies in the past 10 to 15 years has not changed the dominance of OECD countries in Belgian imports of intermediate inputs (see Figure 38). This trend parallels the observation we made in the first part of the study regarding the limited share of BRIC economies in the total export of goods and services by firms located in Belgium.

![Figure 38: Share of imported material and service inputs in total inputs of Belgian companies](image)


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The ‘OECD’ category includes the countries that were members of the OECD in 1995 (beginning of the period studied). It excludes countries that became a member between 1995 and 2007.
2. International sourcing trends in Belgium and international comparisons

2.1 Sample description

The dataset we have built by merging the ORN survey data with the survey data we collected in Belgium between March and May 2012 (see Appendix for further details) counts a total of 5073 cases of imported services. Belgian companies represent 8% of the sample with 430 international sourcing initiatives. We compare these initiatives with the 2755 international sourcing initiatives originating from US companies (49% of the sample) and 2420 initiatives from companies located in other European countries (43% of the sample – primarily Netherlands, Germany, Spain, UK and Denmark). Figure 40 depicts the composition of the sample.
The dataset counts 64% of large companies (> 500 employees), 16% of medium companies, and 20% of small companies (< 51 employees). But the average size of companies in the three sub-samples differs substantially (see Figure 41). Quite logically, the Belgian sample counts a majority of global sourcing initiatives originating from SMEs, while the US sub-sample is dominated by large firms.
The share of different industry sectors varies also quite a lot across the three sub-samples (see Figure 42). The Belgian sub-samples has a heavy representation of international sourcing cases originating from professional services firms, whereas half of the US sample concerns the IT, software, banks and insurances sectors.

**Figure 42: Percentage of international sourcing initiatives studied by industry sector**

Source: Offshoring Research Network global survey

### 2.2 Why do firms source services from foreign countries?

International sourcing drivers have long been, and still are, dominated by cost reduction incentives thanks to immediate benefits of labor arbitrage in low-cost destinations countries. However, cost savings is not the only factor that motivates companies to undertake international sourcing initiatives. Figure 43 below shows the top 5 strategic drivers for undertaking international sourcing initiatives for Belgian companies as compared to other European and US firms studied by the ORN. Beyond cost motives, companies usually emphasize that international sourcing decisions are driven by growth objectives, organizational flexibility motives, and the access to qualified personnel abroad.
2.3 What services do companies source abroad?

Figure 44 compares the distribution of internationally sourced functions by companies surveyed in Belgium, other European countries and the US. The distribution is very similar across the three sub-samples. Administrative (including, among others, finance and accounting, human resources, marketing and sales, and procurement processes) and IT and software services are by far the most international functions, with respectively 35% and 33% of all international sourcing cases in the Belgian sample. Next, technology services and call-centers represent respectively 21% and 11% of international sourcing initiatives studied in Belgium.
Figure 44: Internationally sourced functions
in % of total international sourcing initiatives studied

Source: Offshoring Research Network global survey

Note:
‘BPO’ includes finance, accounting, human resources, marketing and sales, procurement, legal and other back office functions.
‘IT & Software’ includes the development and maintenance of IT infrastructure, and the development of software.
‘Technology’ includes R&D, product design and engineering services
‘CC’ (Contact centers) includes both inbound and outbound contact centers.

2.4 Where do companies source services?

Although they source similar types of functions, Figure 45 shows very different location choices among the surveyed companies in the three sub-samples. Belgian companies appear rather conservative in their choices of international sourcing destinations with a great majority of services sourced from nearshore locations. Indeed, more than 50% of international sourcing cases from Belgian companies concern neighboring countries of Western and Eastern Europe (including Russia). In only 17% of cases have Belgian companies selected to source services from India. In contrast, India is the favorite location of many companies in other European countries and even more in the US. Thanks to its large pool of English-speaking qualified workers, India was the first emerging economy to be seen as an attractive offshore location for business services, and is still today.
Nearshore destinations (e.g. Eastern and Western Europe) remain popular international sourcing destinations for other European companies but not to the same extend as for Belgian companies.

Figure 45: Share of foreign countries and regions in total international sourcing initiatives studied

Source: Offshoring Research Network global survey

A growing number of Belgian companies also decide to locate service activities in African countries (11% of total cases studied). Although labor costs are typically low, most African countries still cannot compete with the level of expertise and size of the qualified labor pool of Asian countries and, to a certain extent, also Latin American countries. Moreover, if many Eastern European countries score high on the qualification of their workforce, costs are also higher than what Asian countries offer.

Figure 46 adds another nuance. If the countries selected by Belgian companies often differ from those selected by companies from other European countries or the USA, the reasons for choosing those countries are very similar. It follows that location choices could partly be a matter of perceptions and, although there exist various sources of data to assess those two criteria, decision makers of Belgian companies seem to perceive the cost of labor and quality of labor force available in various countries somewhat differently than decision makers in other countries.
Finally, when selecting a foreign country to source services from, Belgian companies do not give as much importance as other firms to their prior local contacts and expertise or to the regional growth potential that different countries represent. Again, this corroborates previous findings about the limited international exposure and orientation of Belgian companies, in particular when it comes to fast growing emerging economies.

2.5 How do companies source services internationally?

When sourcing services internationally, companies can choose between different service delivery models. Our data allows differentiating three main models: the outsourcing model, the captive model, and the partnering model. In the outsourcing model the firm contracts with a third-party service provider that delivers the service at least in part from a foreign country. With the captive model the firm launches a fully owned subsidiary in the foreign country, or uses an existing one, or
acquires a foreign company. The partnering model includes joint-ventures, strategic alliances and other forms of partnerships.

In more than half of the international sourcing cases surveyed in Belgium the company has opted for the captive model (see Figure 47). In comparison, in more than half of US cases the services are outsourced, while other European companies seem as likely to outsource as they are to choose the captive model. These findings support the assumption of Belgian companies being more conservative in their offshoring decisions than other European or US firms. Few Belgian companies are willing to give up control to third-party service providers (26%). They seem to prefer keeping full - or at least partial - ownership of their processes by using the captive model (54%) or the partnering model (20%).

Figure 47: Delivery models of international sourcing initiatives

Source: Offshoring Research Network global survey

Although potentially offering greater control over the services, the captive model requires a large upfront investment for the firm, and hence goes hand in hand with greater financial and strategic risks. Moreover, the captive model precludes Belgian firms from benefiting from the deep expertise and the scale economies that external providers are able to achieve. If it is true that the small size of many Belgian companies limits their attractiveness vis-à-vis large international providers, there is however a growing pool of providers that specialize in providing smaller scale services. In other words, the size of Belgian companies may not be as deterministic as it seems.
3 Outcomes and risks of international sourcing for Belgian firms

Our data shows that Belgium is characterized by different patterns of international sourcing, not so much in terms of type of functions or drivers for international sourcing, but more in terms of chosen locations and models used. Those differences impact the gains that Belgian firms derive from their international sourcing projects as well as the risks they perceive.

3.1 Outcomes of international sourcing

In terms of impact of international sourcing on the Belgian economy, Michel and Rycx (2011) used Federal Planning Bureau data from 1995 to 2004 to show that while imports of material inputs has no effect on Belgian productivity, imports of service inputs have a positive effect on the productivity of manufacturing firms. Coucke and Sleuwaegen (2008) also found that international sourcing from non-European countries increases the chance of survival of Belgian firms.

International sourcing provides the opportunity for companies to perform each of their activities where it makes the most sense economically and organizationally. In that sense, it can have positive impacts at different levels of an organisation. Our data show that, in the area of service activities, the major outcomes of international sourcing initiatives for Belgian companies are the increase in firm’s overall competitiveness and in productivity and efficiency, a better focus on core competencies, improved organizational flexibility, and better access to qualified personnel (see Figure 48).
We find that whereas the type of functions sourced abroad is relatively similar between Belgian companies and other European and US companies, the international sourcing gains that Belgian companies are able to derive tend to be lower. The dimension where Belgium is most lagging behind is the use of international sourcing to support a firm’s growth strategy. By reorganizing its value chain activities, a firm could for instance reorient its resources towards more value-adding or growth-generating activities, at the same time as importing supporting functions from lower cost countries. Sourcing services from foreign countries may also help boost the growth of sectors constrained by shortages of qualified personnel, such as the ICT sector and in particular small firms in that sector. Looking at international sourcing from such a growth angle could bring an element of answer to the limited growth perspectives of Belgian firms identified in the first part of the study.

The first reason that may explain the relative counter-performance of Belgian firms can be looked for in Belgian firms’ conservative practices when it comes to selecting a country and delivery model for the services they source from abroad. As discussed above, Belgian managers favor nearshore locations and internal models more than other European and US managers. Internal sourcing to
nearshore locations is not a bad solution in itself if it corresponds to different strategic objectives pursued by Belgian firms compared to other firms. But without such a strategic alignment justification, it may unnecessarily prevent Belgian firms from benefiting from the location advantages of more distant countries, and typically fast growing emerging economies, as well as from the scale and expertise advantages that external providers may offer. The lack of strategy and the weak global service delivery structure are two other reasons we explore below that contribute to explain the limited gains Belgian firms derive from their international sourcing initiatives.

3.2 Lack of international sourcing strategy and weak global service delivery structure

Companies with a corporate-wide international sourcing strategy present an overall higher retention of international sourcing outcomes than companies without such a strategy (see Figure 49). Implementing a corporate-wide international sourcing strategy requires a profound rethinking of the way a firm considers its international sourcing initiatives. In order to obtain the full benefit of international sourcing gains, companies should evolve from a purely cost-focused international sourcing strategy to a strategy of value creation through greater efficiencies and transformed business processes on a global scale. However, developing such international sourcing strategy does not mean abandoning the benefits of one stage to move to the next one. Indeed, for certain activities, it may not make sense to move beyond labor arbitrages or scale advantages while for other activities, the objective will instead be to create longer-term competitive advantages by reengineering certain firm processes. Defining a corporate-wide international sourcing strategy is a dynamic process and requires periodic revision. It also requires developing new knowledge and capabilities in order to experiment business models that were previously unimaginable.
A corporate strategy for international sourcing provides a clear vision of the expected gains and helps guide the practices of the different departments towards the realization of those gains. The strategy also gives greater visibility and executive support to the international sourcing initiatives, and is often at the basis of well needed coordination and sharing of experiences among people involved in sourcing initiatives. But our data show that half of the surveyed Belgian companies did not develop a strategy for guiding international sourcing. In contrast, for more than 70% of other European and 60% of US companies, having such strategy in place at the group or at least at the business unit level seems to be a primary concern.

Even more striking is the low percentage of Belgian firms that take the time to optimize their global service delivery structure and align it to their strategy for international sourcing. Compared to the 60% of other firms that do follow a clear process for establishing a global delivery structure that supports the international sourcing strategy, only 21% of Belgian firms claim to do so. This can lead to different kinds of problems. For instance, because of a lack of systematic and coherent approach, firms that opt for the outsourcing model may end up swamped under a sea of small contracts with
different providers. If working with more than one provider offers the advantage of reducing the firm dependency on any one of them in addition to putting them into competition and maximising the degree of specialisation of each provider, it also has the drawback of adding a lot of complexity in the management of the contracts. Extreme multisourcing also limits the possibility to achieve scale economies and develop good partnership relations between firms and their suppliers.

Also, because of a lack of competence or simply time dedicated to the choice of best sourcing country, firms may opt for sub-optimal solutions that, if they allow reducing certain risks such as exchange rate fluctuations of cultural differences when opting for a Euro-zone country, expose them to other risks such as a difficult access to qualified personnel, high wage inflation, or high employee turnover typical of highly demanded cities.

Figure 50: Impact of designing an optimal global delivery structure on international sourcing outcomes (Average score on 1 to 5 scale)

Different structures have different advantages and drawbacks in function of the firms’ objectives with international sourcing. It is important to carefully assess the different options and choose the one that best fits with each firm’s objectives, potentially with the help of a specialized consultancy.
firm. Indeed, similar to what we observe with the existence of a corporate sourcing strategy, an effective global service delivery structure aligned with the strategy also differentiate the firms that derive the greatest gains from their international sourcing initiatives (see Figure 50).

3.3 International sourcing risks and barriers

If there is no doubt about the possibility to gain from international sourcing, there is equally no doubt about the existence of risks. The most important concerns for Belgian managers relate to the risk of poor quality of services, difficulty to find qualified personnel abroad, operational inefficiencies, cultural differences, and loss of control (see Figure 51).

Figure 51: Perception of international sourcing risks
(Average score on 1 to 5 scale)

Source: Offshoring Research Network global survey

In fact, firms that get the best outcomes (US and other European firms studied) also tend to be the ones that perceive the greatest risks. On the contrary, conservative practices of Belgian companies that favor internal sourcing from nearshore locations lead them to perceive less risks of international sourcing than other firms. Three types of risks however contradict that general trend. First, although
they often select to source services from other European countries, Belgian managers perceive slightly greater difficulties to manage cultural differences than American managers. Second, they perceive higher difficulties to attract qualified personnel abroad. Third, Belgian managers rate the risk of opposition from trade unions higher than in other countries.

Fortunately, comparing the perception of risks by firms that already have international sourcing experience with perceptions of firms that have not yet sourced any service abroad (see Figure 52) confirms that, providing adequate effort, Belgian firms are able to implement risk management strategies that effectively reduce the risks they face. All of the dimensions of risk studied seem to be overestimated before firms initiate their first international sourcing initiative. In particular, experience in international sourcing allows Belgian companies to better manage risks related to data security and IP protection, political instability in host countries and loss of synergies across firms’ activities. Some risks however, such as the risk of cultural differences, difficulty to find qualified personnel abroad, operational inefficiencies, poor quality of services, and loss of control, remain important even for experienced Belgian companies.

**Figure 52: Perception of international sourcing risks**

by experienced and non-experienced Belgian companies (Average score on 1 to 5 scale)

<table>
<thead>
<tr>
<th>Risk Description</th>
<th>Non-experienced</th>
<th>Experienced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultural differences with employees in offshore...</td>
<td>3.1</td>
<td>2.8</td>
</tr>
<tr>
<td>Difficulty finding qualified personnel</td>
<td>3.4</td>
<td>3.2</td>
</tr>
<tr>
<td>Concerns about operational efficiency</td>
<td>3.2</td>
<td>2.9</td>
</tr>
<tr>
<td>Concerns about service quality</td>
<td>3.3</td>
<td>2.8</td>
</tr>
<tr>
<td>Loss of managerial control</td>
<td>3.3</td>
<td>3.0</td>
</tr>
<tr>
<td>Lack of acceptance from internal clients</td>
<td>2.9</td>
<td>2.6</td>
</tr>
<tr>
<td>Loss of process knowledge</td>
<td>3.1</td>
<td>2.8</td>
</tr>
<tr>
<td>Lack of acceptance from customers</td>
<td>3.2</td>
<td>2.9</td>
</tr>
<tr>
<td>Internal resistance</td>
<td>3.2</td>
<td>2.9</td>
</tr>
<tr>
<td>High employee turnover in offshore service...</td>
<td>3.5</td>
<td>3.3</td>
</tr>
<tr>
<td>Concerns about data security</td>
<td>3.4</td>
<td>3.2</td>
</tr>
<tr>
<td>Legal /contractual risks</td>
<td>3.3</td>
<td>3.0</td>
</tr>
<tr>
<td>Wage inflation in offshore location</td>
<td>3.2</td>
<td>2.9</td>
</tr>
<tr>
<td>Lack of intellectual property protection</td>
<td>3.2</td>
<td>2.9</td>
</tr>
<tr>
<td>Concerns about industrial relations/trade...</td>
<td>3.4</td>
<td>3.2</td>
</tr>
<tr>
<td>Political backlash at home</td>
<td>2.8</td>
<td>2.6</td>
</tr>
<tr>
<td>Political instability in offshore location</td>
<td>2.9</td>
<td>2.7</td>
</tr>
<tr>
<td>Loss of synergy across firm activities</td>
<td>3.1</td>
<td>2.8</td>
</tr>
</tbody>
</table>

Source: Offshoring Research Network global survey; Belgian data
Finally, we also asked 74 managers of Belgian firms that do not source services internationally what factors could make them change their mind and consider looking abroad to source some of their value chain activities. Results provided in Figure 53 suggest that the most important barriers are the lack of confidence in the possibility to reduce costs, the small scale, and lack of resources and capabilities for quantifying risks, implementing and managing international sourcing initiatives. The perceived instability of potential host countries also limits the adoption of international sourcing. In other words, the most important barrier to the adoption of international sourcing practices is that managers fear they would not be able to deal with the complexity of such initiatives and are therefore concerned they may not achieve sufficient cost savings. Hence, increasing the intensity of international sourcing in Belgium would require firms to develop new skills and capabilities that would make managers more confident in their ability to gain from sourcing every one of their service activities how and where it is the most effective and efficient.

Figure 53: Kick-off factors for Belgian managers to consider international sourcing
(Average score on 1 to 5 scale)

Source: Offshoring Research Network global survey; Belgian data
4 Key messages to managers

Don’t be afraid to look abroad for sourcing service activities.

Important gains can be made with regards to firm competitiveness, organizational flexibility, efficiency and productivity, focus on core business, and access to qualified personnel.

Maximizing these gains require firms to:

- Develop a sourcing strategy at corporate level, optimize the service delivery structure globally with careful choice of delivery locations and models, and align the global delivery structure with the strategy.
- Invest in developing specific skills and capabilities to deal with the complexity of reorganizing value chains and coordinating activities across borders, including in important areas of strategic planning and change management, risk assessment and mitigation, cross-cultural and virtual management, and contract and supplier relationship management.

The usual risk / benefit trade-off applies between the relatively low risk options of internal and nearshore sourcing on the one hand and, on the other hand, the benefits that external sourcing to more distant countries offers in terms of access to large pools of qualified labor as well as expertise and scale economies of specialized providers.
GENERAL CONCLUSION

Despite a positive growth of total exports between 2002 and 2011, the share of Belgium in world export markets has declined for both manufacturing goods and services. Export of knowledge intensive products and trade with emerging markets are the areas where Belgium lags behind most. However, specialization into high value adding activities is a key enabler of growth in developed economies like ours.

The study finds that the proportion of exporting firms has also declined between 2000 and 2010. Moreover, whereas large firms and subsidiaries of multinationals in Belgium account for the majority of exports, small and medium size firms play a central role in generating new exports. In fact, half of the newly exporting firms have internationalized very early, if not right from their creation. With the biggest growth rates in exports, added value and employment, those ‘born global’ or ‘born international’ SMEs are very important for the Belgian economy.

Next to the export of goods and services, Belgian firms internationalize also by reorganizing their value chains and sourcing services from foreign countries. Although still limited compared to the import of material inputs, the trend is growing. Firms see the import of services as a way to reduce costs, but also grow, improve flexibility, and access qualified personnel. Unfortunately, although Belgian firms source services that are very similar to those sourced by firms in other European countries or the United States, the gains are often smaller. At least three factors can explain the relative underperformance of Belgian firms: i) the recourse to conservative sourcing practices that favour close countries and internal deliver models, ii) the lack of sourcing strategy, and iii) the non-optimization of international service delivery structures.

Turning to the barriers that hinder the diffusion of international sourcing, Belgian managers fear they do not have the resources and capabilities to handle the complexity of global sourcing initiatives, and hence would not be able to achieve the cost savings they expect. But provided sufficient effort is put into planning and implementation, most companies, including SMEs, seem to be able to manage the risks of sourcing services from foreign countries.

Looking at complementary faces of internationalization, the study provides two central messages to firms and policy makers. First, supporting economic growth through export in Belgium requires a greater focus on high value added activities and public policies tailored to the specific needs of ‘born
global’ or ‘traditional’ exporting firms. Second, whereas there is no doubt on the difficulty to source services internationally, there is also no question on the potential gains in terms of competitiveness. Therefore, to fully leverage the potential gains, Belgian managers and decision makers should invest in developing a new global sourcing capability.
References


Ernst & Young, 2011. The world is bumpy. Globalization and new strategies for growth.


International Monetary Fund, 2011. World Economic Outlook April 2011.


Common abbreviations

EU-12: Belgium, Germany, Denmark, France, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain and the United Kingdom

EU-15: Belgium, Germany, Denmark, Finland, France, Greece, Ireland, Italy, Luxembourg, Netherlands, Austria, Portugal, Spain, Sweden and United Kingdom

Eurozone 12: Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, and Spain

US or USA: United States (of America)

UK: United Kingdom
Appendix – survey methodology (Part 2)

The survey was initially targeted at a sample of 264 companies. Depending on the sector of activity we selected companies with a total number of employees greater than 300, 500 or 750 (see breakdown in Figure A1). We used various databases to obtain contact details of managers and executives in those 264 companies. All were first contacted by email, followed with up to 3 reminder phone calls. In order to increase the number of participants and extend the survey to smaller firms we also partnered with the European Outsourcing Association - Belgian chapter, BECI, Agoria and FEB/VBO to diffuse the survey invitation to their members. To allow for more fine grained analyses and international comparisons, we then merged the data with data collected by the Offshoring Research Network in the United-Stated and other European countries between 2005 and 2011. The unit of analysis of the dataset is the imported service (i.e. one particular function sourced from a particular country in a given year) irrespective of the value or size of the service. The dataset we used for this study counts a total of 5073 cases of imported services.

![Figure A1: Criteria for selecting companies to include in initial survey sample](image-url)
The Offshoring Research Network (ORN) is a community of researchers and practitioners studying organisations in their transition to globalizing their business functions, processes and administrative services. The project was initiated by Prof. Arie Lewin at the Duke Center for International Business Education and Research (CIBER) at Duke University - The Fuqua School of Business (USA), in November 2004, in response to the lack of rigorous robust firm-level data on offshoring as an emerging business practice. Today, the ORN is composed of a network of partner business schools in several countries including Belgium (ULB – Solvay Brussels School of Economics and Management).

The core of the ORN project is the realization of multi-year surveys on firms’ global sourcing practices around the globe. ORN’s overall objective is to track over several years the adoption of offshoring administrative and technical functions with surveyed companies ranging from early adopters of offshoring to majority adopters. A survey research method is used to build a firm-level database on when companies started offshoring, what particular business function is involved, where it was offshored, what service delivery model is used and why. The ORN surveys provide a unique focus. Instead of capturing a firm’s general experience with offshoring, the collected data focus on the specific offshore projects of the company, allowing the separate analysis of specific functions that a company has offshored to particular locations at a given moment in time, without regard to contract value. Observations about the expected and achieved benefits, the perceived risks and the impact of offshoring on companies’ strategy are provided along with insight on the type of offshored functions, the chosen location and the reasons motivating this choice, the service delivery models used by respondents (captive, outsourcing, partnership, hybrid) as well as their future offshoring plans. Moreover, The ORN study targets both SMEs and large companies, be they currently offshoring, considering offshoring in the near future as well as companies that do not want to start offshoring.

Data collected by ORN partners are useful to produce knowledge and researches on offshoring. Examples of studies relying on ORN data include company case studies, thematic studies, and complementary commissioned studies for corporate members and annual survey reports. The ORN provides additional services such as workshops, executive roundtables and trainings. Moreover, ORN partners have published a series of academic and practitioner-oriented articles, conference presentations and papers in major journals in business and management worldwide.

More information:
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