

## REGULATORY POLICY ADJUSTMENTS IN GERMANY'S EXPORT PROMOTION INSTRUMENTS IN LIGHT OF CROSS-BORDER PRODUCTION CHAINS<sup>1</sup>

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The German export sector has been a central pillar of Germany's economic development for decades. Over the last ten years exports as a share of annual gross domestic product (GDP) have risen from 30 percent to over 40 percent. However, private banks and financial intermediaries are not always in a position to provide adequate financing for projects with large volumes and of long duration. In this context, state export credit guarantees (Hermes guarantees in Germany) play an important role. They cover potential payment default risks in return for a risk premium paid by the exporter which makes it easier for German companies to finance their exports.

In a previous study (Felbermayr, Yalcin and Heiland 2013; 2014) the Ifo Institute has demonstrated that Hermes guarantees promote German exports by mitigating a partial failure of the capital market. Moreover, employment effects were quantified for the first time with the help of a causal analysis. Against a background of increasingly international supply chains and an accompanying decline in domestic production as a share of German exports, this new analysis explores the extent to which employment effects of Hermes guarantees are changed within an industry if the share of foreign added value varies. With the help of these insights it is possible to analyse whether an increase in the share of foreign added value permitted under Hermes guarantees helps to secure jobs. The study also explores the related em

<sup>1</sup> This article is based on: Sandkamp and Yalcin (2015), „Nettobeschäftigungseffekt einer Regelungsänderung bei den Hermesdeckungen“, ifo Schnelldienst 68 (13), 27-37; see also: Felbermayr et al. (2015), Beschäftigungseffekte der Exportkreditgarantien des Bundes und globale Wertschöpfungsketten, ifo Forschungsberichte 68, ifo Institut.

<sup>2</sup> Ifo Institute (both).

ployment effects abroad. The results aim to promote the further development of this government instrument, with a focus on how the shares of foreign added value in exports covered by Hermes guarantees can be sensibly regulated.

In order to take advantage of Hermes guarantees for export business, companies need to prove that a minimum share of their production consists of value added in Germany, although a measure of discretion is exercised. A three-tier model was set up in 2008, which stipulates that foreign supplies and services can be used representing up to 30 percent of the order's value without any special justification and can still be covered by a Hermes guarantee (tier 1). In tier 2 exports with a foreign added value share of between 30 percent and 49 percent can be taken into consideration insofar as an economic necessity can be proven (e.g. specialised inputs or price) and/or other criteria are fulfilled. This involves higher administrative costs for the companies involved. Tier 3 provides for a rule decided on a case by case basis, whereby exports with foreign added value shares of over 49 percent can be covered by a Hermes guarantee. For such export business the necessity of foreign purchases must be explained in detail. On the basis of this explanation an Inter-ministerial Committee subsequently decides

Figure 1

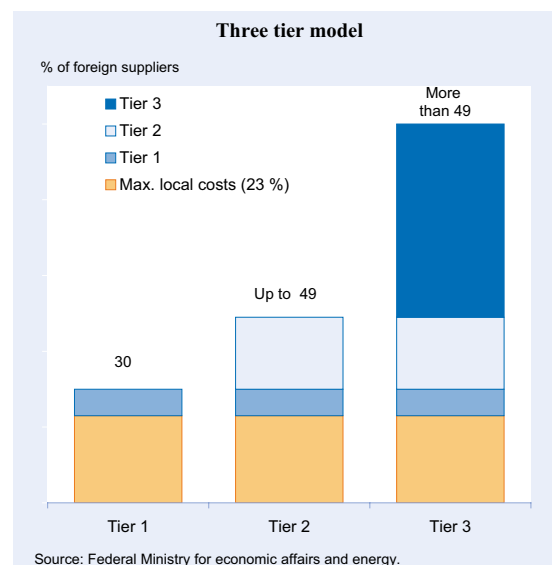
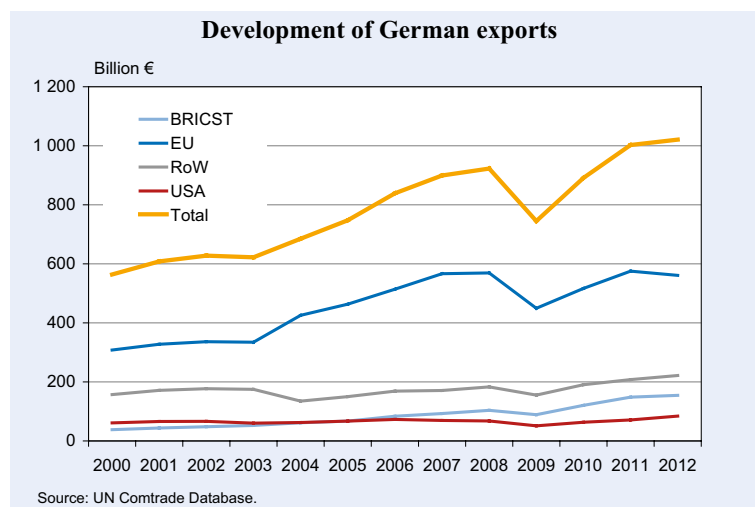


Figure 2



whether to grant Hermes coverage. Across all tiers, it is possible to receive coverage for local (destination country) costs of up to 23 percent (counting towards the total allowance of foreign added value). The three-tier model is shown in Figure 1.

#### Development of German exports, international industrial linkages and Hermes guarantees

Between 2000 and 2012 German exports rose by around 83 percent. This amounts to an average growth rate of 5.2 percent per year. Figure 2 shows that total German export volumes experienced a sharp increase up to 2008, the year the financial crisis started. German exports subsequently fell by 19 percent between 2008 and 2009, but managed to stage a quick recovery, returning to a higher level than in 2008 as early as 2010.

again considerably in recent years.

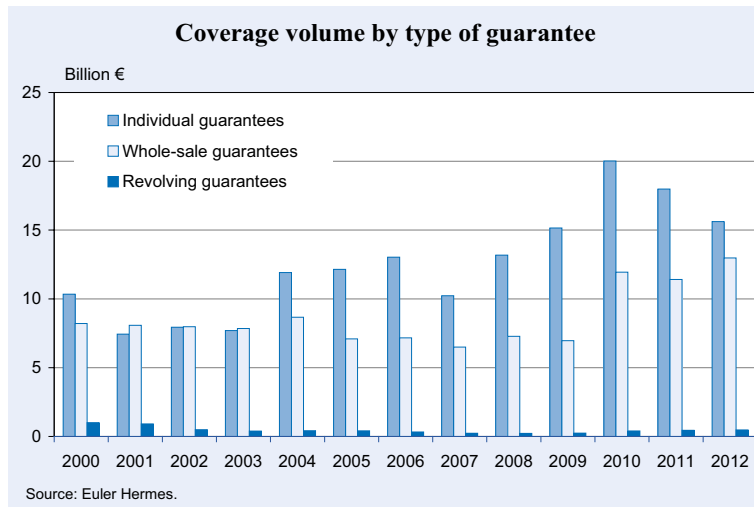
Hermes guarantees can be divided into individual guarantees (IND), whole-sale guarantees (WSG) and revolving guarantees (REV). These three kinds of guarantees differ significantly in their development. The volume of the revolving guarantees halved from around EUR one billion per year in 2000 to below EUR 500 million in 2012 (Figure 3). Individual guarantees and whole-sale guarantees developed very similarly up until 2004 (around EUR eight billion in volume). As of 2004, however, the volume of individual guarantees soared compared to that of whole-sale guarantees. Prior to 2010 a divergence can be seen between the usage volumes of both of these types of coverage. Developments in 2011 and 2012, however, show a fall in this divergence, with the coverage volume of whole-sale guarantees rising and the volume of individual guarantees declining. This was partly due to the fact that the German federal gov-

Table 1

Development of exports and coverage ratio													
Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Exports (in bn EUR)	597.44	638.27	651.32	664.45	731.54	786.27	893.04	965.24	984.14	803.31	951.96	1061.23	1095.77
Year on Year change in %	17.1%	6.8%	2.0%	2.0%	10.1%	7.5%	13.6%	8.1%	2.0%	-18.4%	18.5%	11.5%	3.3%
Exports / GDP	29.2%	30.4%	30.5%	30.9%	33.3%	35.3%	38.6%	39.7%	39.8%	33.8%	38.2%	40.7%	41.1%
Year on Year change in %	3.7%	1.2%	0.2%	0.4%	2.4%	2.0%	3.2%	1.2%	0.0%	-5.9%	4.3%	2.5%	0.4%
Coverage ratio	3.3%	2.6%	2.5%	2.4%	2.9%	2.5%	2.3%	1.8%	2.1%	2.8%	3.4%	2.8%	2.7%

Source: UN Comtrade Database and Euler Hermes.

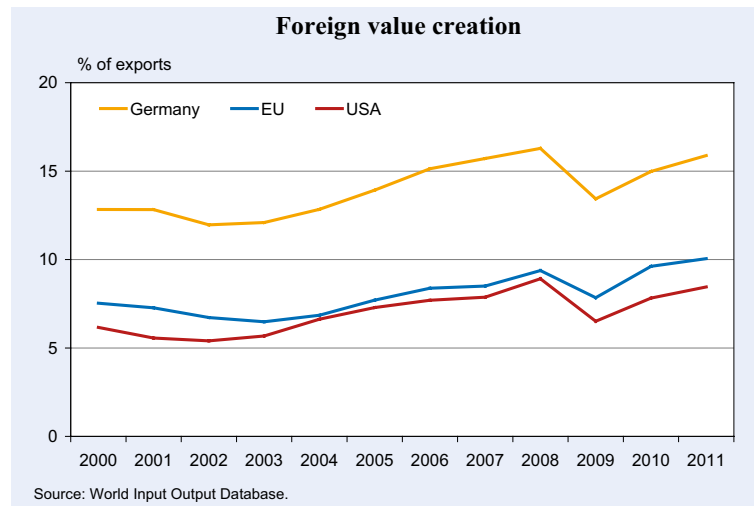
Figure 3



cent have also increased in recent years. On average individual guarantees in sectors with strong exporters display foreign added value shares of between 10 percent and 22 percent, whereby Hermes covered exports into high-growth emerging economies like China tend to have the highest shares of foreign added value.

**The importance of exports, Hermes cover and foreign added value shares for employment from the perspective of German companies**

Figure 4



In order to assess the importance of Hermes guarantees, a survey of 1,368 firms was carried out. In addition, detailed interviews were conducted with selected representatives of the four companies Linde AG, Siemens Financial Services GmbH, SMS Siemag AG and Voith GmbH. While the business survey provided a cross section of all company sizes, expert interviews spotlighted the position of large companies.

ernment successfully expanded the circle of countries in which whole-sale guarantees can be offered during the financial crisis.

As shown in Figure 4, the average share of foreign added value has increased steadily. Compared to the USA and the EU, foreign added value as a share of exports is almost twice as high in Germany. Especially in sectors with strong exporters, such as the automotive sector, the share of foreign added value has already reached a level of over 30 percent. The data available do not point to any slowdown in these trends.

Exports with a Hermes guarantee and a foreign added value share of over 20 percent, 30 percent and 40 per-

cent have also increased in recent years. As already shown by the aggregated export data, export business is essential for German companies. Exports as a share of total revenue clearly rose between 2007

and 2013. At the same time, as seen in Figure 5, jobs depending on exports also increased between 2007 and 2013. In 2013 over 60 percent of employees were directly (in production) or indirectly (via supplying) dependent on exports at 45 percent of the companies surveyed. Along with globalisation, the share of foreign added value has risen for many companies. The survey respondents named cost aspects, specialised products, partners abroad as well as local content requirements as reasons for relying on foreign inputs (Figure 6).

An important question regards the development of foreign and German supplies as a share of total production and of companies' exports. As shown by the corporate survey, foreign supplies are increasingly important for

export-oriented companies. 71 percent of companies rely on foreign purchases to remain competitive. German companies mainly obtain foreign intermediate goods from EU producers, although emerging economies are increasingly gaining importance.

However, emerging economies contain higher economic risk compared to industrialised economies. When accessing new markets in particular, assessing the risks present is often only possible on a limited basis, meaning that private financing options may not be available. Higher financing costs arise in these countries due to the higher country risks that accompany a lower development status. These risks have to be taken into account in a company's long term planning.

As a consequence of these imperfections, 90 percent of companies surveyed use Hermes guarantees to protect themselves against default risks. Small and medium-sized companies in particular would not be able to carry out their underlying exports without Hermes guarantees. Further motivations are an insufficient ability to finance risky exports internally (39 percent), as well as a lack of insurance products offered by the market (35 percent).

As a result, 32 percent of firms stated that they could not have done the export business in question without Hermes guarantees. Two thirds of companies would have done half of the exports in question at most. For 50 percent of companies this resulted in securing existing employment, while for 12 percent Hermes guarantees even created additional jobs in Germany (Figure. 7).

As explained above, the share of foreign added value in the production of export goods plays a key role in the successful qualification for Hermes guarantees. It is therefore unsurprising that two thirds of companies reported a share of foreign added value below 30 per-

Figure 5

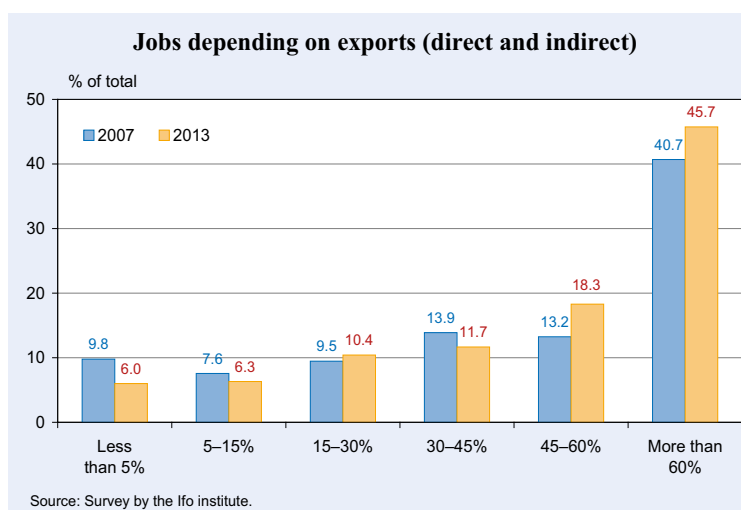
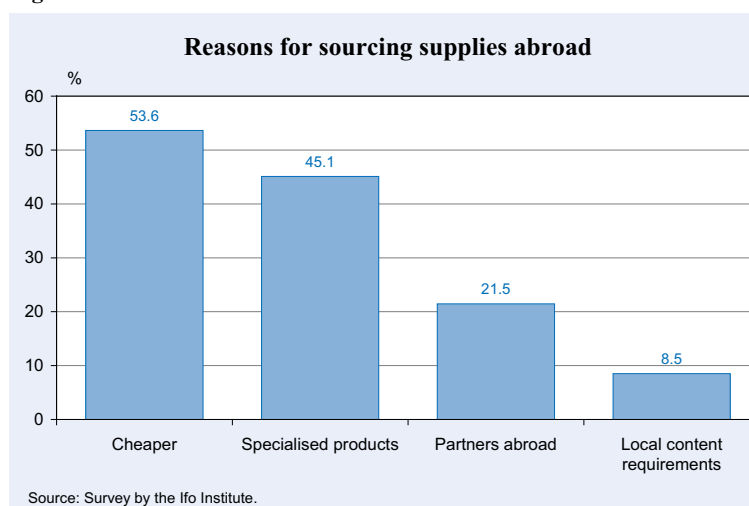


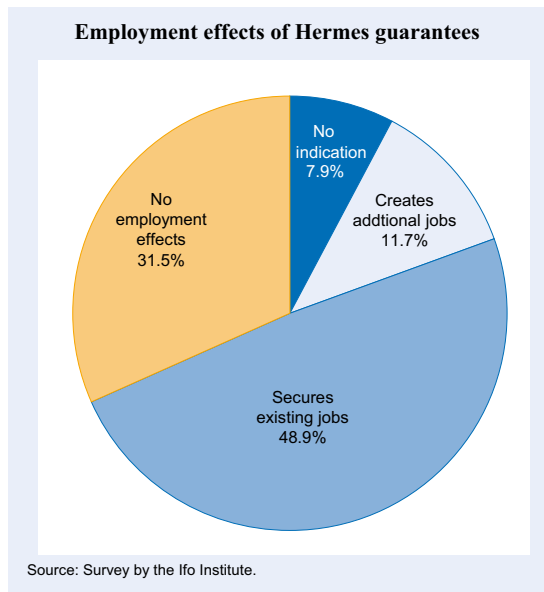
Figure 6



cent in Hermes guaranteed exports. Only seven percent of companies reported exports with a share of foreign added value above 50 percent. In general, however, the share of foreign added value is greater for companies with higher export ratios. Large companies in particular expect foreign added value for exports to increase.

The present coverage policy is sufficiently flexible for 46 percent of companies. For 13 percent of companies the existing three-tier model is not flexible enough. It is mainly large companies that are not satisfied with the current rules on foreign added value shares permitted under Hermes coverage. 16 percent of companies would like to see no limitations on the share of foreign added value. With the present three-tier model, 25 percent

Figure 7



of companies expect settlement problems with export business. Two thirds of companies would not explicitly transfer jobs abroad if the foreign added value shares permitted under Hermes coverage were raised, while a further 15 percent cannot yet assess the impact of such a measure.

The *expert interviews* confirmed that, in the field of large projects and plant construction, it is in many cases impossible to do export business in high-growth international markets without Hermes guarantees. This makes the state instrument very important, especially for accessing new markets. The use of foreign intermediate goods is indispensable to help companies remain competitive. A significant increase in the use of foreign intermediate goods in export business has been observed in recent years, driven by fiercer competition.

Moreover, German plant manufacturers can often only successfully win large contracts if a large share of the project is carried out by local companies in the destination countries. High shares of foreign added value thus provide a competitive advantage. Moreover, German large plant manufacturers first and foremost provide technology and knowhow. This results in low shares of domestic added value in

these export deals. For large projects in particular companies cannot perform any major processing procedure at the end of the value chain in Germany. As a result, no certificate of origin can be issued, which would have allowed for more generous allowances. In this respect large projects are at a disadvantage.

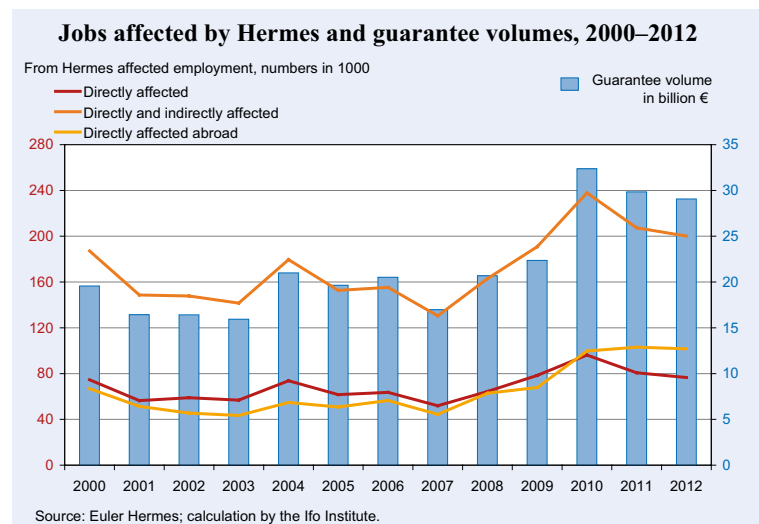
The existing three-tier model therefore doesn't satisfy the demands of the companies surveyed. Although tier 3 offers the opportunity to use Hermes guarantees for exports with a high share of foreign added value, the administrative efforts required are too great. The case-by-case rule by the Inter-ministerial Committee leads to planning uncertainty and endangers export business.

**Calculation of the employment effects of Hermes guarantees using an input-output analysis**

Establishing the potential employment effects that may accompany a change in coverage policy in Hermes guarantees calls for a precise quantification of the direct and indirect employment effects. Studies to date have neglected the dynamic development of national and international interconnections between sectors in their input-output analyses. To conduct a reliable simulation of possible reforms, the potential employment effects must be calculated taking into account the changing input-output tables. Building on these dynamic results, the employment effects arising from Hermes guarantees can be estimated more accurately.

To start the analysis, an upper ceiling to the employment effect is identified. This corresponds to the num-

Figure 8



ber of employees who are involved in the production of Hermes-guaranteed goods either directly (employed by guarantee recipients) or indirectly (employed by suppliers or their suppliers). It is calculated using input-output tables from the national accounts. Based on the assumption that every euro of guarantees leads to a production increase of one euro for the guarantee recipient (maximum effectiveness), the number of employees affected by Hermes would equal the number of jobs created by Hermes. Moreover, it has to be assumed that any increase in production is 100 percent due to the recruitment of additional workers and not through higher utilisation of existing capacity or automation.

Figure 8 shows developments in guarantee volumes, as well as the employment related to it for the years 2000 - 2012. The analysis shows that in the period under observation around 172,000 jobs in Germany were affected by Hermes guarantees with an average guarantee volume of EUR 21.6 billion. 65,000 jobs abroad, of which 62 percent are in the EU, need to be added to this figure. The most important sectors are machine building (36 percent of all jobs), the chemicals sector (26 percent), as well as the automotive sector (including cars 20 percent). Around 96 percent of directly affected jobs are in

companies headquartered in West Germany. Around 70 percent of directly affected jobs are at large companies.

### Econometric analysis

The export generating impact of export credit guarantees is estimated using a gravity model. Since both exports and Hermes guarantees vary according to the three dimensions of sector, destination country and year, it is possible to use destination country-sector dummies  $v_z^s$ , destination country-year dummies  $v_{zj}^s$ <sup>3</sup> and sector-year dummies  $v_j^s$ . The estimation equation is therefore:

$$\ln \text{EXP}_{z,j}^s = \beta_0 \text{HERMES}_{z,j}^s + v_z^s + v_{z,j}^s + v_j^s + \varepsilon_{z,j}^s$$

In this instance the Hermes variable  $\text{HERMES}_{z,j}^s$  either stands for a dummy, if guarantees were available in a certain year for a specific destination country, for the logarithmic volume of guarantees or for the coverage ratio:

$$\text{COVERAGE RATIO}_{z,j}^s = \text{SUM OF GUARANTEES}_{z,j}^s / \text{EXP}_{z,j}^s$$

<sup>3</sup> Some specifications do not include destination country-year dummies. In these specifications, further controls varying across time and country are included. These are the logarithms of gross domestic product, population and capital formation as well as a customs union dummy, an economic zone dummy (regional or free trade agreement) as well as an indicator for country risk.

**Table 2**

Average effects of individual guarantees, sectoral data									
Hermesvariable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Hermes (0,1)			ln guarantees			Coverage ratio		
Hermes	0.178*** (0.025)	0.161*** (0.025)	0.163*** (0.025)	0.014*** (0.002)	0.013*** (0.002)	0.013*** (0.002)	0.656*** (0.102)	0.618*** (0.104)	0.653*** (0.103)
ln GDP	0.669*** (0.030)			0.669*** (0.030)			0.671*** (0.030)		
ln POP	-0.113 (0.092)			-0.114 (0.092)			-0.116 (0.093)		
Customs union (0,1)	0.101*** (0.039)			0.101*** (0.039)			0.097** (0.039)		
Economic zone (0,1)	0.036 (0.038)			0.036 (0.038)			0.035 (0.038)		
Country risk (0-7)	- (0.010)			- (0.010)			- (0.010)		
ln capital formation	0.078*** (0.026)			0.078*** (0.026)			0.079*** (0.026)		
Fixed effects									
Country-sector	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year-sector	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year-country		Yes	Yes		Yes	Yes		Yes	Yes
N	65579	65579	83408	65579	65579	83408	65579	65579	83408
N_G	6120	6120	7853	6120	6120	7853	6120	6120	7853
R2	0.119	0.173	0.167	0.119	0.173	0.167	0.119	0.173	0.167

\*\*\*, \*\* and \* correspond to significance at the 1, 5 and 10% level. Robust standard errors are adjusted for serial correlation.

Source: Calculation by the Ifo Institute.

Table 3

Average employment effects of Hermes							
Hermesvariable	Coefficient	Standard error	IND <sup>1)</sup> incidence	Export creation	Export dependent employment	Employment created by IND	Employment created by Hermes <sup>2)</sup>
Hermes (0.1)	0.163	0.025	0.025	0.41%	9,823,768	40,719	70,269
ln guarantees	0.013	0.002	0.390	0.51%	9,823,768	49,833	85,997
Coverage ratio	0.653	0.103	0.003	0.22%	9,823,768	21,142	36,485

<sup>1)</sup> Individual guarantees ; <sup>2)</sup> Extrapolation based on average shares of WSG and REV in total coverage volume.

Source: Calculation by the Ifo Institute.

Of interest here is the coverage coefficient  $\beta_0$ , which stipulates how sensitive bilateral exports in a specific sector react to the availability of Hermes guarantees. This effect is identified via the variation in guarantees and exports over time in individual export markets (destination country-sector combination). If the coverage coefficient is, as expected, positive, this means that export growth in export markets covered by Hermes is higher than in markets that are not covered by Hermes, or covered to a lesser degree.

Table 2 summarises the results of the regression described with the logarithm of the destination country-sector-year specific exports as a dependent variable. Columns (4) to (6) analyse the effect of the log of the total guarantees, which were guaranteed in a given year in a sector in a specific destination country. The coefficient can thus be interpreted as an elasticity.

Column (4) already takes into account destination country-sector fixed effects, meaning that it is no longer necessary to control for variables such as distance or

comparative advantage in individual sectors that do not change over time. The same applies to year-sector fixed effects as the introduction of new products in a sector. This already reduces potential distortions through unobserved and thus omitted variables, which have simultaneous impacts on exports and Hermes guarantees. Moreover, it raises the number of observations that can be considered, since information for certain year-sector and/or destination country-sector specific variables may not be available for all countries and/or sectors. All of the variables that vary by year and destination country must continue to be included. Columns (5) and (6) also feature year-destination country fixed effects, so that variables varying by year and destination country drop out there. Moreover, column (6) takes into account observations for which no information on GDP, population, customs union etc. is available.

As column (6) shows, a one percent increase in the coverage volume (sum of guarantees) within a destination country-sector cell in a specific year leads to a 0.013 percent increase in that cell. Multiplied by the share of

guarantees in total exports (per sector) this gives an average export-generating effect of 0.51 percent, which means that 0.51 percent of all German exports are only realised thanks to Hermes guarantees (Table 3). Multiplying this figure with the total number of jobs depending on exports gives the number of jobs created by individual guarantees. If one assumes that whole-sale and revolving export guarantees operate in a similar way to individual guarantees, the overall effect of export credit guarantees can be extrapolated. Under the assumptions made regarding employment structure, Hermes guarantees re-

Figure 9

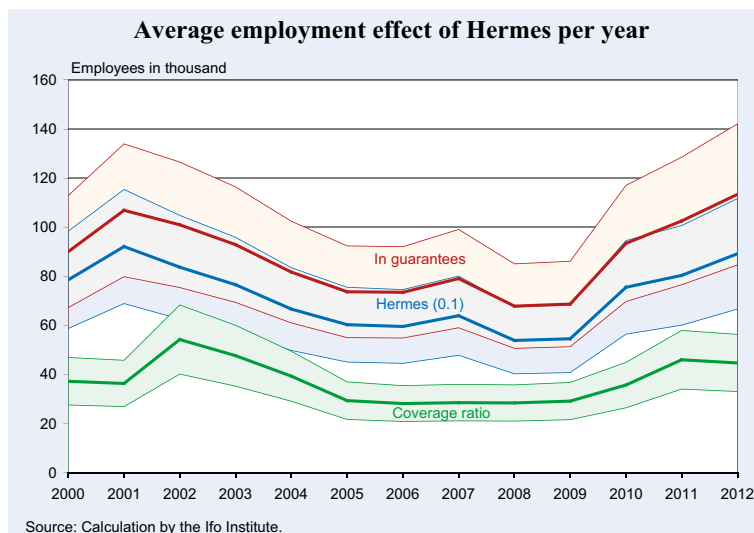


Table 4

Average employment effect of Hermes abroad					
Hermesvariable	Export creation	Export dependent employment abroad	Employment abroad created by Hermes*	Employment in the EU created by Hermes*	Employment outside of the EU created by Hermes*
Hermes (0.1)	0.41%	2,802,147	20,044	12,242	7,802
ln guarantess	0.51%	2,802,147	24,530	14,982	9,548
Coverage ratio	0.22%	2,802,147	10,407	6,356	4,051

\* Extrapolation based on average shares of WSG and REV in total coverage volume.

Source: Calculation by the Ifo Institute.

sult in up to 86,000 additional jobs on average according to this estimate. This figure was as high as 113,000 in 2012.

Export credit guarantees therefore increase German exports. This result is robust across all three methods used

to measure Hermes guarantees (binary dummy (1) – (3), logarithmic coverage sum, as well as coverage rate (7) – (9)). The development of employment effects (including 90 percent confidence intervals) over time is presented in Figure 9.

Figure 10

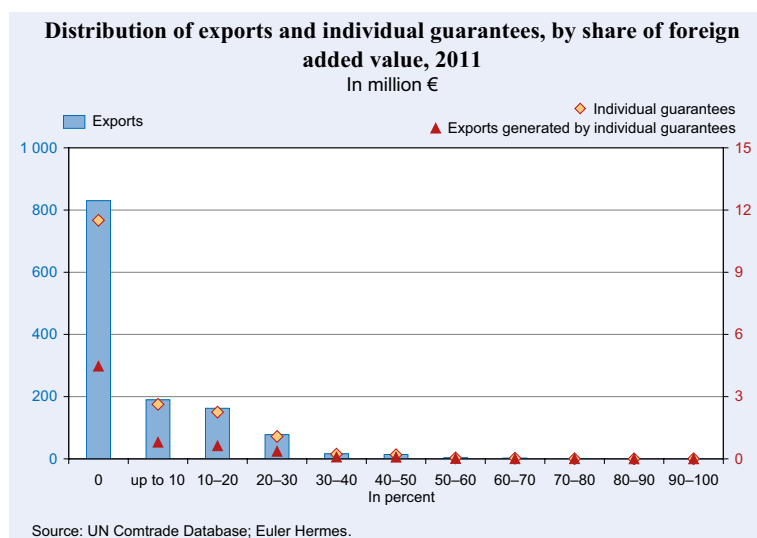
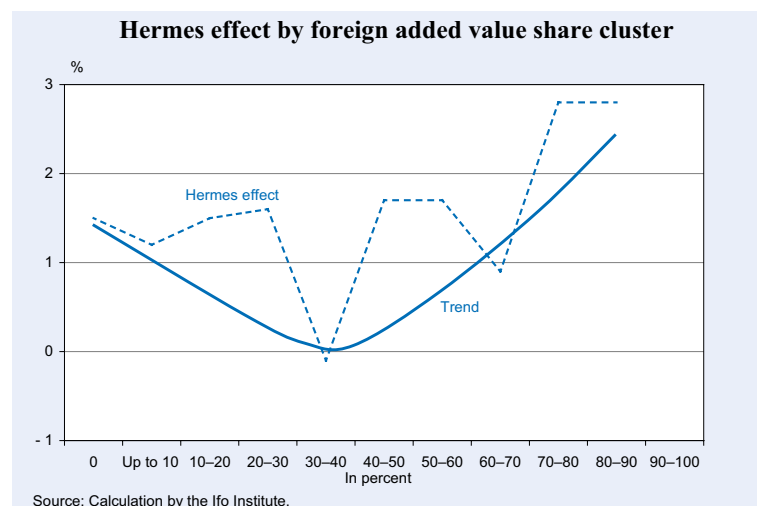


Figure 11



Parallel to the development of the rising share of foreign added value as a percentage of German exports, a steady increase in Hermes-related employment abroad can also be observed (Table 4), mainly in Europe, where up to 12,000 jobs benefited from the instrument in 2012. A sectoral breakdown shows that with over 48,000 jobs dependent on Hermes in Germany (around 11,000 abroad) the machine building industry is responsible for by far the greatest employment effect. It is followed by aircraft and spacecraft construction with 24,000 employees in Germany (17,000 abroad).

**The development of foreign added value and its importance to Hermes guarantees**

To analyse the impact of a rising share of foreign added value on the exports and jobs generated by Hermes guarantees, the current distribution of individual guarantees and exports over eleven clusters with different shares of foreign added value is presented and the export generating impact on individual clusters is estimated



(Figure 10). The analysis is limited to individual guarantees, since whole-sale guarantees and revolving guarantees are hard to assign to individual sectors.

With the help of data provided by Euler Hermes, it is possible to estimate the export-generating effect of each of the foreign added value clusters. Figure 11 presents the Hermes effects for the various foreign added value clusters. These represent econometrically estimated partial effects over all of the years in question. The Hermes effect arising on the clusters considered is not linear.

The estimates indicate that Hermes effects for exports with a small share of foreign added value have a positive effect of 1.4 percent on average. As the share of foreign value rises this figure initially falls, before almost doubling to a positive figure of over two percent for foreign added value shares of over 50 percent.

To estimate the employment effects that may accompany a more flexible three-tier rule, three channels of impact need to be taken into account: higher shares of foreign added value lead *ceteris paribus* to a) more foreign added value and consequently to a partial transfer of jobs abroad, b) the protection of export business that would otherwise be lost, and thus to the preservation of jobs in Germany, and c) to higher exports generated by Hermes due to higher Hermes effects in higher foreign added value clusters. Relatively more exports are therefore created per euro of guarantees.

Table 5 shows the results of a simulation for different scenarios. Based on the calculated average increase in foreign added value shares of eight percent, scenarios

I to III show an upwards shift in export volumes per foreign added value cluster by one cluster. Scenario I assumes that 20 percent of all exports generated by Hermes fall into a higher foreign added value cluster. In scenario II (III) 40 percent (80 percent) of all exporting companies increase their foreign added value so that they fall into a higher cluster. Scenarios IV.a to IV.c suppose the same increase in foreign added value shares, but additionally presume annual export growth of two percent.

The mid-term increase in the share of foreign added value in German exports will lead to a transfer in the jobs created by individual guarantees from Germany abroad (6,000–7,000 jobs). This development, however, is necessary both to protect existing export business and to promote growth in exports. Rising exports thus produce net employment growth of 10,000 to 67,000 jobs created via individual guarantees.

Should the integration of value chains continue to grow, German companies will see a growing volume of exports with a high share of parts supplied by foreign subcontractors in the medium and long-term. A guarantee policy that lacks flexibility could endanger jobs in Germany. On average up to 7.4 percent of employees dependent on individual guarantees will be involved in the production of exports that will be negatively affected by the current coverage policy, since they have a foreign added value share of over 30 percent. This corresponds to around 5,000 jobs. 1.4 percent of the jobs dependent on individual guarantees are even seriously endangered due to a foreign added value share of over 50 percent. These figures represent average values. Our interviews with experts revealed that individual firms already have

**Table 5**

Jobs created by Hermes guarantees by share of foreign added value							
	Hermes induced employment						
Foreign added value	2011	Scenario I	Scenario II	Scenario III	Scenario IV.a	Scenario IV.b	Scenario IV.c
Affected by increase		20%	40%	80%	20%	40%	80%
0	39,656	27,927	20,945	6,982	37,506	28,129	9,376
Up to 10%	7,138	12,009	17,734	29,184	16,128	23,816	39,194
10% to 20%	5,581	5,187	5,461	6,009	6,966	7,334	8,071
20% to 30%	3,209	3,243	3,660	4,495	4,355	4,916	6,037
30% to 40%	744	1,089	1,523	2,391	1,462	2,045	3,211
40% to 50%	686	614	624	645	825	838	866
50% to 60%	150	226	321	509	304	431	684
60% to 70%	32	49	70	111	65	93	150
70% to 80%	44	37	34	30	49	46	40
80% to 90%	0	8	16	31	11	21	42
90% to 100%	-	0	0	0	0	0	0
> 30% share	2.9%	4.0%	5.1%	7.4%	4.0%	5.1%	7.4%

Source: Calculation by the Ifo Institute.

far higher foreign added value shares and are therefore more strongly affected.

If coverage policy is made more flexible, this will create more jobs abroad. However, a potential liberalisation of coverage policy should not be seen as the root cause of this job relocation, but as a prerequisite for German firms to remain competitive. An adjustment of the coverage policy of Hermes guarantees – via increasing the ceilings for tiers 2 and 3, for example – would therefore secure jobs in Germany in the medium term, which may otherwise be lost. A liberalisation of 10 percentage points alone would be sufficient to secure 4.7 percent of jobs dependent on individual guarantees (transfer from tier 2 to tier 1) and transfer one percent of acutely endangered jobs from tier three to the more secure tier two. This corresponds to 75 percent of all jobs currently under threat.

#### **International production linkages, Hermes guarantees and reinsurance**

The steady increase in the share of foreign added value in exports is not merely a German phenomenon, but represents a worldwide structural development resulting from the growing cross-border integration of industries and companies. Companies ignoring this structural development risk being overtaken by their international competitors. Against this background, Germany will have to accept a rising volume of foreign added value in German exports covered by Hermes guarantees if German firms are not to be disadvantaged in terms of their international competitiveness.

While a growing cross-border fragmentation of production has been taking place for years in terms of the real economy, similar developments cannot be identified on the financing side of the exports in question. In the years ahead, the German federal government thus faces two key challenges related to the further development of Hermes guarantees. On the one hand, greater flexibility in coverage policy is essential to help German exporters compete internationally. On the other hand, the growing concentration of financing risks that would accompany rising coverage of higher shares of foreign added value has to be avoided. As a consequence the German government would have to pass on default risks to partner countries whose companies participate in and benefit from Hermes guaranteed export business to a greater extent than it does at the moment.

In principal the German government could already pass on the financing risks taken on via Hermes guarantees to the countries in which companies also benefit from export projects secured by such coverage. This kind of risk diversification is technically possible via so called reinsurance agreements with partner countries. Germany already has reinsurance agreements with public export credit insurers, especially in the EU and other OECD member states. However, relatively little use is made of such agreements compared to the Hermes guarantees provided. Since reinsurance represents sensible complementary support to Hermes guarantees for risky export business, and at the same time constitutes an instrument for transferring risks to other countries, simplifying and standardising reinsurance mechanisms and extending reinsurance contracts should be a key goal of reforms of this instrument.

#### **Conclusion**

The growing integration of international production is boosting imports of foreign intermediate goods, independent of Hermes guarantees. Foreign suppliers to Germany benefit from German firms with high exports. It is these very suppliers, in turn, that contribute to the success of German exports. The data presented in this study indicate that cross-border integration can be expected to continue. Germany will therefore have to take into account higher shares of foreign added value in its Hermes guarantees in the years ahead, if German firms are not to suffer a competitive disadvantage.

A key aspect of a more flexible coverage policy is the question of the extent to which Germany should solely accept financing risks for exports, while a growing number of companies from different countries are participating in and thus benefitting from German exports. To provide a sustainable, self-supporting funding instrument in the future, the German federal government will have to introduce processes based on reinsurance and other financial instruments that will enable it to adequately pass on default risks to countries whose companies benefit from Hermes-guaranteed exports.

#### **References**

Felbermayr, G., E. Yalcin and I. Heiland (2013), *Beschäftigungseffekte der Exportkreditgarantien der Bundesrepublik Deutschland (Hermesdeckungen)*, ifo Forschungsberichte 63, Ifo Institute, Munich.

Felbermayr, G., E. Yalcin and I. Heiland (2014), "The Role of State Export Credit Guarantees for German Firms", *CESifo Forum* 15 (3), 52–55.

Felbermayr, G., E. Yalcin, A. Sandkamp and P. Lang (2015), *Beschäftigungseffekte der Exportkreditgarantien des Bundes und globale Wertschöpfungsketten*, ifo Forschungsberichte 68, Ifo Institute, Munich.

Sandkamp, A. and E. Yalcin (2015), „Nettobeschäftigungseffekt einer Regelungsänderung bei den Hermesdeckungen“, *ifo Schnelldienst* 68 (13), 27–37.